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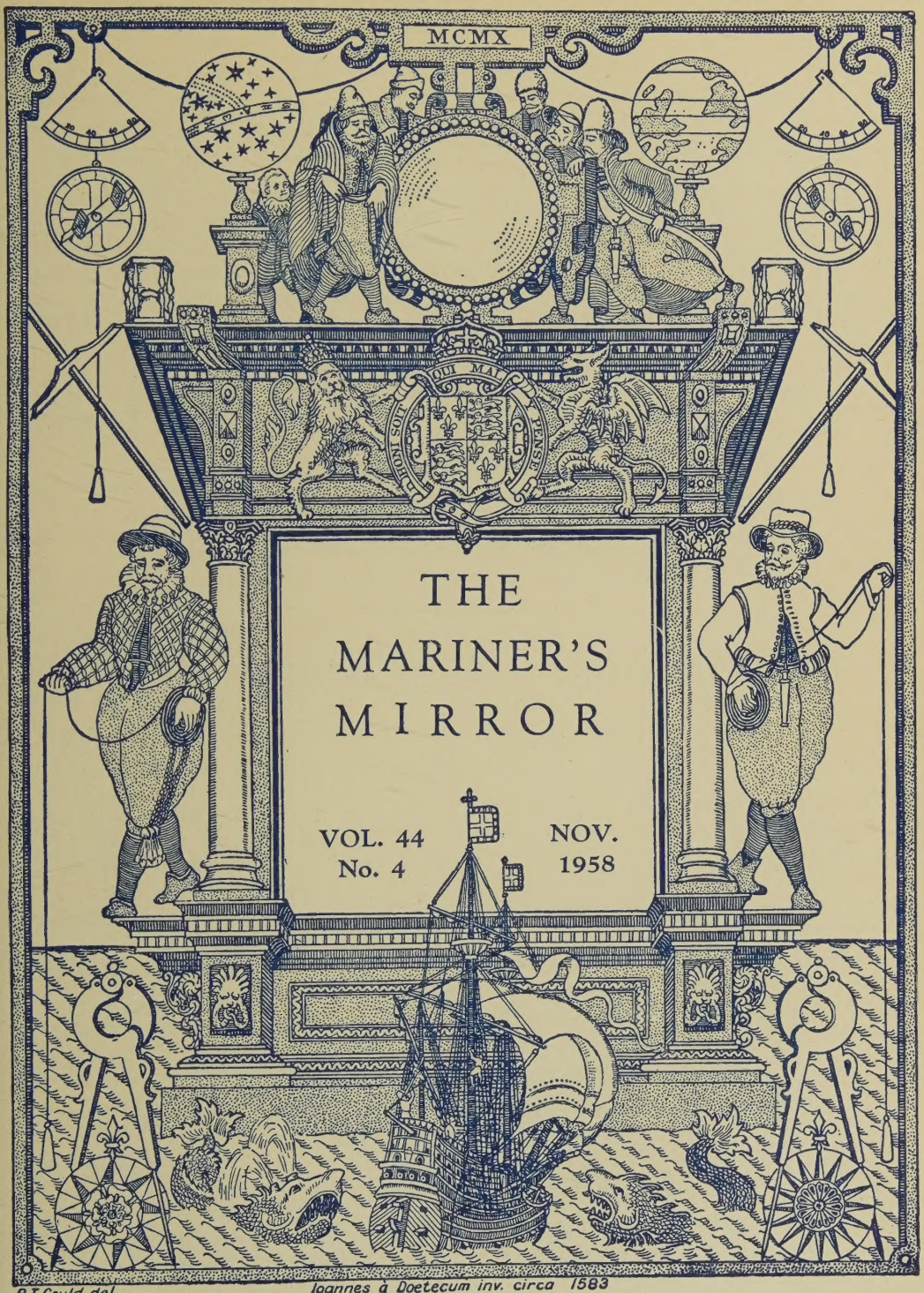

THE MARINER'S MIRROR

VOL. 44 No. 4 NOV. 1958

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Names of ships should be underlined to denote *italics*, and not written within inverted commas.

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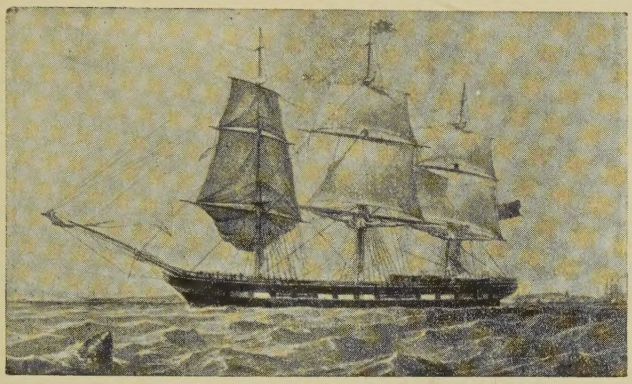

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CORRECTION TO VOLUME 44

P. 240, line 2, *for* 1745 *read* 1754

OBITUARY

COMMANDER J. W. DAMER POWELL, D.S.C. (AND BAR), R.D., R.N.R.

On 25 July 1958 there passed away one who, in a quiet and unobtrusive manner, contributed much information on maritime history. Commander Powell was born in Bristol, in 1887, and after his schooldays at Clarence School, Weston-super-Mare, he went to sea at the age of 17. His career at sea included service in a three-masted schooner, P & O liners, trawlers, a tug during the General Strike, yachts and battleships. During the 1914–18 War he commanded a division of minesweepers, based on Lowestoft, for three and half years. This division was subsequently transferred to the White Sea for a further year, and during this time he was awarded the D.S.C., and the Russian Order of St Anne. With the outbreak of war in 1939, Commander Powell returned to the Navy and, after service at Dunkirk, for which he was 'Mentioned in Despatches', he carried out a number of important assignments. During 1942–3 he was the British naval officer in charge of the repatriation, in Italian liners, of Italian civilians and prisoners of war from Abyssinia to Italy. A delightful account of the proceedings may be read in Alec Glasfurd's *Voyage to Berbera*. Referring to the Commander he wrote: 'He had a more scrupulous sense of fair dealing than any other man I know, was an authority of naval history and antiquities, and his mind was a deep pool of curious seafaring lore.'

In the last phase of the War he was a Commodore of Convoys along the East Coast and through the ill-famed 'U-boat Alley'. For his services he was awarded a bar to the D.S.C.

Commander Powell was a frequent contributor to the *Mariner's Mirror* and he was the author of *Bristol Privateers and Ships of War*. He was ever ready to impart his wide knowledge to correspondents, and many will remember him for the painstaking and courteous manner in which he dealt with the enquiries addressed to him.

GALLEON INTO SHIP OF THE LINE

By Rear-Admiral A. H. Taylor

I

A FORMER article 'Carrack into Galleon', *M.M.*, Vol. xxxvi, p. 144[1], traced the development of the art of fighting at sea from 'the ship of forecastle' whose chief means of offence were bills and bows to the Elizabethan galleon armed on Wynter's 'proporcion' with the culverin and demi-culverin, and a few demi-cannon in the gun-room.

The present article carries on the survey to the end of the First Dutch War, fought largely by the ships, successors of the galleon, built or re-built in King Charles's time, supported by Cromwell's frigates and hired merchant-ships.

In two succeeding articles it is hoped to bring this survey up to Pepys' Act and establishment of 1677. As Sir Westcott Abell has told us,[2] we found no time in the wars with France for new designs; those set up in 1677 lasted with little change to Trafalgar.

Events are described and opinions given as nearly as possible in the words of the persons concerned. They speak for themselves.

The steps of the process whereby the assemblage of ships of all sorts which fought the Spanish Armada in 1588 was transformed into the balanced fleet of ships all fit to lie in the line projected in 1677 are hard to trace and harder still to date. It takes a long time for changes in the methods of fighting to come into general use and still longer for men to gain confidence enough in the new to drop the old. Once the new is generally adopted, it ceases to be 'news'. We see the effect, but there may be only some casual reference to tell us the cause.

The development of inboard loading, for example, must have had no little effect on the evolution of the ship of the line. There was scarcely a word about it till Carr Laughton wrote of it in the *Mariner's Mirror* of 1928.[3] The Instructions issued by Wimbledon in 1625[4] still direct ships to close in turn the windmost ship of the enemy, 'discharge and fall off'. Yet Mainwaring, writing his Seaman's Dictionary some five years earlier,[5] says of 'Sponge': 'We have it also fitted to the ends of a stiff rope, so is the rammer also, to sponge and lade within board.' The *Revenge*, in her last fight on 31 August 1591, was in close action for fifteen hours with some fifteen ships; by nightfall her men had taken cover in the quarter-deck and forecastle

1 *Mariner's Mirror*, Vol. xxxvi (1950), p. 144.
2 Sir Westcott Abell, *The Shipwright's Trade*, p. 120. (Review, *M.M.* Vol. xxxv, p. 84.)
3 *Mariner's Mirror*, Vol. xiv, p. 337.
4 Corbett, *Fighting Instructions*, p. 59. (N.R.S. Vol. xxix.)
5 Mainwaring and Perrin, *Sir Henry Mainwaring, Life and Works*, Vol. ii, p. 231. (N.R.S. Vol. lvi.)

and continued to engage the enemy with her guns.[1] Of the five ships known to have run aboard her, two sank later from their injuries. Her men must surely have been able to reload within-board under cover from musket-shot.

To load her guns inboard a ship needed space in wake of the guns, breechings fit to check the recoil, sponges and rammers on stiff rope, gun-tackles to run out and traverse, deck-beams strong enough to take the weight and shock of recoiling guns, and above all sufficient guns' crews sufficiently trained. (Drake, it will be recalled, was told by Howard to spare his powder;[2] and was said to have carried twice the men Hawkins thought necessary.[3]) Some or all of these qualities were probably lacking in most of the hired merchant-ships and many of the prizes and fourth-rates included in the fleets of the Dutch Wars.

Of the thirty ships with Wimbledon in 1625, only the three flagships were men-of-war: the *Anne Royal*, late *Ark Royal*; the *Convertine*, late *Destiny*; and the *St George*. The remainder seem, from their names, to have been hired merchant-ships. Thus the character of the fleet was much like that which had fought the Spanish Armada, with an even smaller proportion of ships built for fighting; and the Fighting Instructions issued were not inappropriate, for they differed little, there is reason to think, from those 'much liked of' by the Council Howard had called after the first day's fighting in 1588.[4] The additional instructions drawn up by a Council held at sea two days after sailing met the soldiers' desire for order and regularity, qualified by the seamen's caveat that they would 'maintain the instructions as well as they could'. This is the first recorded instance of a written Order of Battle, though Frobisher had organized his force in squadrons in 1578, Howard had done the same in 1588, and a regular order had been observed in Baskerville's squadron in the action off Cuba in 1596. Furthermore, Wimbledon's Council, having perhaps in mind the cavalry tactics of the Reiters, directed that the approach, discharge and fall-off were to be carried out by three ships at a time, in ranks. It was also the first recorded attempt to impose upon a fleet the keeping of accurate station in action. Considering the unhappy history of the expedition, it was perhaps as well they never had to do it. But the idea of mutual support seems to have taken root, and produced good fruit in 1636. Wimbledon's additional instructions seem also to have greatly increased the strength of the guns' crews[5]: enough for inboard loading, and more than the establishment of 1677.

1 E. M. Tenison, *Elizabethan England*, Vol. VIII, p. 484*d*.
2 Corbett, *Drake and the Tudor Navy*, p. 288.
3 Williamson, *Sir John Hawkins*, p. 318.
4 Corbett, *Fighting Instructions*, p. 52.
5 Carr Laughton, *Mariner's Mirror*, Vol. XIV, p. 342.

Monson, who drew up the Instructions for the Ship-money Fleet of 1635,[1] of which he was second-in-command under the Earl of Lindsey, had no use for Wimbledon's cavalry tactics, nor, apparently, for splitting the squadron into three divisions and a reserve, although the fleet consisted of nineteen ships of the Royal Navy and twenty-six hired merchant-ships. There is one notable change. It is still the aim to gain the wind, to be 'out of danger of being boarded' and have 'the advantage where to board and how to attempt the enemy'; but the former direction to engage in turn the 'windermost ship or ships' of the enemy is gone. Taken in conjunction with Monson's remark that since the bowline enabled ships to sail within six points of the wind, a fleet in a formation adapted from land warfare could easily be routed, it seems that seamen were already alive to the advantages of the line of battle.

Lindsey's instruction runs: 'no ship shall presume to assault the Admiral, Vice-Admiral, or Rear-Admiral, but only myself, my Vice-Admiral, or Rear-Admiral, if we be able to reach them. And other ships are to match themselves accordingly as they can, and to secure one another as cause shall require.' The fighting unit was neither the ship nor a well-connected line of ships nor a team with specific duties, but a loose group of ships, probably sailing in order of seniority. Still, Monson was satisfied: 'The wind being thus gotten, a General need give no other directions than to every admiral of a squadron to draw together their squadrons, and everyone to undertake his opposite squadron, or where he shall do it for his greatest advantage; but to be sure to take a good berth of one another, and to relieve that squadron that shall be overcharged or distressed.[2]

It was Monson's advice to get within pistol shot of the enemy,[3] to ply her and her ports with small-shot and to load the ordnance with musket bullets, cross-bar, langrel shot and billets, to be the destruction of men; 'fighting further off. . . is nothing but the wasting and consuming of powder to little purpose'.

The Earl of Northumberland, who commanded the second Ship-money fleet of 1636, became Deputy to James Duke of York in 1638, when the latter was appointed Lord High Admiral at the age of 4; and his guardian, by order of the Parliament, from 1645 to 1648, when Colonel Bampfield got James over to the Hague.[4] It must have been from Northumberland and his advisers that James got his grounding in sea affairs. Pennington

1 Oppenheim, *Monson's Tracts*, Vol. IV, p. 8, and Vol. III, p. 223. (N.R.S. Vols. XLV and XLIII.)

2 *Monson's Tracts*, Vol. IV, p. 98. (N.R.S. Vol. XLV.) Corbett, *Fighting Instructions*, p. 77.

3 *Ibid.*, Vol. IV, p. 94.

4 F. C. Turner, *James II*, p. 14.

was the vice-admiral and Mainwaring the senior captain. Mainwaring did not share Monson's faith in small-shot; in 1619 he had advised the Venetians that three large ships would give them better value than seven small ones, for the fire of the large ships would prevent the small ones using their upper-deck guns and muskets.[1] In his Dictionary Mainwaring defined a 'right brave man-of-war';[2] in the *Sovereign of the Seas* Pennington, as the King's chief adviser, provided one that met all his requirements, only possible in a very large ship.

Northumberland's fleet comprised twenty-seven ships: eighteen were men-of-war of 24–44 guns, four were Whelps and five hired merchant-ships. He was not going to manœuvre them in ranks, like Wimbledon; nor, like Lindsey, to leave the private ships, to borrow Codrington's words, to scramble into battle as soon as they could. What he did was to tell them off in groups of three to second their leaders.[3] For a fleet of poor ships and worse ship's companies, commanded by officers inexperienced in fleet work, it was a much more sensible and practical procedure than Northumberland's predecessors had laid down. It seems to have met with general acceptance and started a good custom of active mutual support, for though not directly prescribed in later Instructions, it was the regular practice in the battles of the First Dutch War; it was invaluable for handling the mixed fleets of that period; it was admired and copied by our opponents, and persisted at least up to the Battle of Malaga in 1704. De Ruyter issued similar instructions to his own squadron in 1653, though with the Dutch emphasis on boarding.[4] In later years increased reliance on signals from the Admiral, and sometimes bitter personal and political rivalries, let the good custom languish, until revived by Nelson. It was displayed at its best at Trafalgar.

Though Northumberland does not use the term 'Division', he refers to Mainwaring and Mennes as his vice- and rear-admirals, so we may look on him as the father of the organization in three squadrons of three divisions each, which saw us through the Dutch Wars and after. The sense of most of his articles was embodied in later Instructions. The last: 'The uncertainty of a sea fight is such that no certain instructions can be given . . .', comes to life again in the Trafalgar Memorandum. Only Northumberland and Nelson saw that an assurance of this kind was what their followers needed to give their best.

It is said of Northumberland that 'no man had ever fewer idle words to answer for';[5] Pepys, writing on 13 October 1668,[6] records his death

1 *Mainwaring, Life and Works*, Vol. I, p. 52. (N.R.S. Vol. LIV.)
2 *Mainwaring*, Vol. II, p. 184. (N.R.S. Vol. LVI.)
3 *Ibid.*, Vol. I, p. 235. (N.R.S. Vol. LIV.)
4 Atkinson, *First Dutch War*, Vol. V, p. 319. (N.R.S. Vol. XLI.)
5 *D.N.B.* 6 *Diary.*

and adds: 'The name of this illustrious nobleman is identified with the British Navy.' Having never commanded a fleet in action, his name has dropped out of sight. But he had given a lead to two of the greatest sea officers in history.

Thus the method of fighting Northumberland intended to adopt was to gain the wind of the enemy, and then bear down upon his flagships in nine groups, with the senior officer in a ship of force as the spear-head, the remaining ships of varying quality seconding their leaders. Signals being few and simple, and movements being largely regulated by observing and following the senior officer's motions, the ships of a group would naturally fall into a loose line ahead.

Though Tromp may not have been the first seaman to realize that ships could best support one another against attack by forming in close order on a line some seven points from the wind, it is from him that we get the first clear exposition of the advantages of such a posture.

Peter White, the master of Pennington's flagship, who saw much of Tromp and his officers between the action of 16 September 1639, in which Tromp with seventeen ships beat off Oquendo with sixty-seven, and the destruction of the Spanish fleet in the Downs on 21 October, explains that in the former action the Dutch kept away a little, drew the Spanish Admiral and part of his fleet from the rest in chase, then shortened sail and 'berthed themselves so, having a fair gale of wind, that in following each other they were but two ships' length asunder, and when they luffed up to give their broadsides, one was clear of the other'.[1]

This was a real Line of Battle—from the reference to luffing up, probably formed not less than seven points from the wind. The Portuguese may well have been accustomed to forming in line, as is suggested by Towerson's account of his action with five Portuguese ships off the Guinea coast in 1557.[2] But as an experienced Portuguese, Dom Francisco Manuel de Mello, who was on board one of the Dunkirk ships, notes that the Dutch fleet was so formed 'that the bowsprit of one was always touching the taffrail of the next ahead', the well-knit line of battle seems to have been originated by Tromp.

In 1642, when the Earl of Northumberland was dismissed by the King and the Earl of Warwick took his place, the Navy contained the two great ships, *Sovereign of the Seas* and *Prince Royal*, twelve ships, galleons rebuilt, of 700–800 tons with 40–70 guns, and eight smaller ships of 30–40 guns. In Warwick's time there were added seven 'frigates' of 440–650 tons with

1 *The Journal of Maarten Harpertzoon Tromp, Anno 1639*, pp. 38–43 and 210–215. (Trans. and ed. C. R. Boxer.)

2 Hakluyt's *Voyages*, Vol. VI, p. 221.

32–46 guns. The Navy Commissioners, who took office in February 1649, added in 1650 two ships of 727 and 745 tons with 50–62 guns and eight frigates of 420–530 tons with 34–50 guns; in 1651 two more ships and four more frigates.[1] Except for the *Sovereign*, which carried on her lower deck 19 42-pr. and 9 32-pr., the authorized armament followed Wynter's proportion. Thus, on the establishment of 1655, the *Triumph* was to carry 6 32-pr., 30 18-pr., 24 9-pr. and 4 6-pr.; the *Speaker*, 4 32-pr., 22 18-pr., 26 9-pr. and 8 6-pr.; the *Bristol* frigate, 24 18-pr., 6 9-pr. and 8 6-pr.[2]

The term 'frigate' seems sometimes to have been loosely applied in the sense of a 'new look' in construction, which may well have included, as Carr Laughton suggested, the means of inboard loading, but its significance is made clear in Ayscue's reply to the Swedish ambassador in 1656.[3] He told him that the old-fashioned ships of the biggest rate were the best for fight, because they were stronger than the frigates, which were made long and light for sailing; they were firm, and like 'a castle in the sea': ironically enough, the very words used by Clifford[4] when he saw the *Royal Prince*, flying Ayscue's flag, stuck fast on the Galloper shoal in the Four Days Fight.

In the mixed fleets of the period, and among the sands of the southern North Sea, the large frigates showed their value, but improvements in the sailing qualities of the heavier ships and the rising standard of gun-power left them no place in the great fleets, which could not be more conveniently filled by ships fit to lie in the line or by smaller ships not expected to do so. A similar fate overtook what Goschen called 'the mighty cruisers' of 1900.

Of the three Generals-at-sea appointed in 1649 to fill Warwick's place, Popham provided a link with past experience in the Navy. He had commanded the *Fifth Whelp* under Northumberland till she sank from leaks in 1637 and the *Rainbow* under Pennington, and was in the Downs in October 1639 when Tromp attacked the Spaniards there. He must have heard what Tromp had done with a line of battle the month before. Popham, it is said, had the good judgement to ask for Blake as his colleague;[5] he could have done the State no greater service. Deane, the third of the Generals, having commanded Cromwell's artillery at Naseby, probably deserves much of the credit for the Fleet's good gunnery and for its administration. On Popham's death in 1652 Monck took his place. Except for service as a soldier in the ill-conducted expeditions of Wimbledon to

1 Lists of Men-of-War, Part I, R. C. Anderson, Society for Nautical Research. Cf. Anderson, *M.M.* Vol. xv, p. 197; Robinson, *M.M.* Vol. xv, p. 271.

2 Oppenheim, *History of Naval Administration*, p. 341.

3 Granville Penn, *Memorials of Sir William Penn*, Vol. II, p. 144.

4 C. H. Hartmann, *Clifford of the Cabal*, p. 105.

5 *D.N.B.*

Cadiz in 1625 and of Buckingham to Rochelle in 1626–28, which may indeed have taught him how things should not be done, he had no experience afloat, but his first master in the art of war was his kinsman Sir Richard Grenville the younger and he owed not a little to the traditions of the family. Till January 1653 he served on shore.

In character and courage Blake and Tromp were well matched. Tromp's many years' experience in handling fleets enabled him, among other things, to make good use of wind, weather, shoal and current; Blake, and Monck after him, enjoyed the authority given by the firm support of a strong central government.

The brief fighting instructions issued by the Admiralty Committee of Parliament in 1648 directed captains, as in those of 1635 and 1636, 'to leave it to the vice-admiral to assail the enemy's admiral, and to match yourself as equally as you can'.[1] There is nothing about gaining the wind of the enemy and nothing like Northumberland's instructions for mutual support.

Revised instructions were issued by the Generals-at-sea, probably on the approach of war with the Dutch. They were still in force when the Battle of Portland was fought, 18–20 February 1653, for Penn received his copy only a week before it.[2] The vice-admiral and rear-admiral were directed, on sighting an enemy fleet, to 'come up with the Admiral on each wing'. The instructions issued on 29 March 1653 added 'right wing' and 'left wing' respectively—probably in confirmation of the practice, and not a change. Now in Tromp's instructions of 1652[3] the vice-admiral is directed to lie or sail immediately ahead of the admiral, and the rear-admiral close astern. This suggests that our fleet was in the habit of manœuvring by squadrons separately, the vice-admiral leading on the larboard tack, the rear-admiral on the starboard, and that the Dutch fleet was not. This is confirmed by a remark in the English account of Albemarle's retreat in the Four Days Fight:[4] 'The Dutch tacking only in the van as they used to do, by that means we got at least a league before them.' Perhaps this difference in practice accounts in part for the misunderstanding which led the French, who had learnt their tactics from the Dutch, to lead off on the wrong tack at Sole Bay.

These instructions also direct that each squadron, instead of each captain, 'shall take the best advantage they can to engage with the enemy next unto them', thus re-establishing the squadron as the unit of battle.

1 Corbett, *Fighting Instructions*, p. 87. (N.R.S. Vol. xxix.)
2 Atkinson, *First Dutch War*, Vol. iv, p. 34. (N.R.S. Vol. xxxvii.)
3 Gardiner, *First Dutch War*, Vol. i, p. 321. (N.R.S. Vol. xiii.)
4 Colenbrander, *Extracts from Foreign Archives*, Vol. i, p. 335.

Of the engagement off Dover on 18 May 1652 between Blake with ten sail and Tromp with forty, Richard Gibson[1] wrote that, on Tromp's closing, 'the General made a sign for the fleet to tack...the rest of the fleet by tacking first placed themselves in a line ahead of the General'. Bourne from the Downs, with seven sail, having calculated the time and tide, 'came in most seasonably' upon the rear of the Dutch Fleet and took two of them. Though Gibson's memories of fifty years back may have been coloured by later experience, it seems that Blake's captains were accustomed to tacking together and to forming in line in the grain of the leader they had been following. The signals or signs in use for handling a fleet before December 1653[2] do not seem to be on record, but some must have been long recognized.

The brief accounts of the action off Plymouth on 16 August between Ayscue with thirty-eight ships and de Ruyter with thirty and a convoy, make it fairly clear that Ayscue, having the wind, with his Vice-Admiral and their seconds, 'charged' the Dutch fleet, fired their broadsides, hauled to the wind, and then repeated the charge, and that only half a dozen ships a side were seriously engaged. De Ruyter remarked that 'if we could have had the use of our fireships, which were all to leeward, we should soon have made an end of them'.[3]

In the action off the Kentish Knock on 8 October 1652[4] between Blake with sixty-eight ships of force, and de With with sixty-two, Blake, having the wind, had to heave to the wind to let his rear ships, coming out of the Downs, form up. Penn, ahead with the Blue squadron, having been told to wait till more ships came up, 'ran a fair berth ahead of our General to give room for my squadron to lie between him and us'. This implies an intention to fight in line. About 5 p.m. Blake bore down to attack, on a northerly course; de With tacked to the southward. 'By means of their tacking,' says Blake, 'the greatest part of our fleet came suddenly to be engaged, and the dispute was very hot for a short time.' Penn, in the *James*, filled to bear after the General, but took the ground on the Kentish Knock, as did the *Sovereign*. To clear the shoal, they tacked to the southward; 'and, indeed, it fell out better for doing execution on the enemy than we could have cast it ourselves; for as the Dutch fleet cleared themselves of our General, he standing to the northward and they to the southward, we fell pat to receive them'.

1 *First Dutch War*, Vol. I, p. 9.
2 *Memorials of Penn*, Vol. II, p. 596.
3 *First Dutch War*, Vol. II, p. 142.
4 *Ibid.*, Vol. II, pp. 272, 276. J. P. Powell, *The Letters of Robert Blake*, p. 176. (N.R.S. Vol. LXXVI.)

One Dutchman was taken, and one carried and abandoned as not worth salving; but when de With wanted to renew the action next morning, some twenty ships had left him.

The Battle of Dungeness, fought on 30 November 1652, was a bad day from which much good sprang. Tromp, restored to his command, with eighty-eight ships of force caught Blake in the Downs with forty-four, of which twelve were hired merchant-ships. Blake's council, having perhaps Oquendo's fate in mind, decided to go to sea and fight. Blake kept the wind to clear the Varne, and off the Ness Tromp's leading ships got within gunshot. Only twenty ships supported the Generals. Only six were closely engaged. Two of these were run aboard and taken; the other four accounted for half the total expenditure of powder.[1] 'There was much baseness of spirit,' wrote Blake, 'not among the merchantmen only, but many of the State's ships.'[2]

Blake accepted responsibility for the defeat and asked to be relieved, but the Council, like the Romans of old, replied by thanking him 'for his good deportment in the action'. At his request they sent down a Commission to enquire into the conduct of the captains and the state of the fleet. Five captains were brought to trial and others, including Blake's own brother, relieved of their commands. The Generals' secretary was superseded. New Articles of War were issued on Christmas Day.[3] New Sailing Instructions were issued in January; the new Fighting Instructions were not issued till 29 March, though some of them may well have been given out in council. In January the Fleet was put into an organization of three squadrons, the Red, White and Blue, of three divisions each, and the appropriate establishment of Flag-Officers.[4] All three Generals were to serve afloat. Monck, who had been ashore, hoisted his flag as Admiral of the White; as Deane elected to remain with Blake, Penn became Admiral of the Blue.

Replying to the Commissioners' enquiries, Blake and nine of his captains reported on 14 December:[5]

> Supposing the enemy to consist of 90 sail of ships of war present, and not likely to lessen in number or force, we humbly offer (as our judgments) that it will be requisite to have a fleet of 60 sail to engage them, all of which we humbly desire to be the State's ships (if it may be), and none of them under 26 guns of force, 40 sail of them to carry from 36 guns upwards. But if there must be some merchant ships, we would willingly have them to be not above 1/5 of the above-mentioned number. . . and none to be less than 28 guns, the least thereof to be saker, and that the commanders and officers be of the State's placing in.
>
> That there be six fireships, sound ships and able to keep sea, and well fitted before we sail, and that the reward to be given be made known.

1 *First Dutch War*, Vol. III, pp. 94, 315. (N.R.S. Vol. XXX.)
2 *Ibid.*, Vol. III, p. 92.
3 *Ibid.*, Vol. III, pp. 374, 418.
4 *Ibid.*, Vol. III, pp. 295 ff.
5 *Ibid.*, Vol. III, p. 167.

We humbly likewise desire that the whole fleet be completed with able seamen according to their respective allowance.

This was the first definite step in the evolution of the Ship of the Line.

The Council succeeded in meeting the Fleet's requirements, or nearly so. At the Battle of Portland, 18–20 February 1653, of the eighty-three ships named in Dr Anderson's list,[1] seventy-one were over 26 guns, of which forty-two were over thirty-six; but twenty-four were merchant-ships—one-third instead of one-fifth; and twenty had been taken from the Dutch. Of the twenty-seven men-of-war built by us, eight were of 50–60 guns, five of them of King Charles's time; seventeen were of 36–48 guns, six of King Charles's time. Owing to comings and goings, the number at any one time was probably about seventy-five, which was the same as the Dutch.

The divisional organization does not seem to be on record, but each division could have comprised one ship of force as flagship, two frigates, two other ships of 36 guns or more, and three smaller. At Portland the rear-admirals flew their flags in frigates, but in the later battles in ships. Eight of the nine flagships which bore the brunt of these battles were of King Charles's time, as Pepys said in moving his Bill in 1677.

When the fleets met off Portland[2] at daylight on 18 February 1653, the measures taken by the Council and the Generals-at-sea, and above all the firmness and courage of Blake, had improved the strength and efficiency of our fleet and restored its fighting spirit. The Dutch ships had been abroad all the winter and were in need of repair and short of provisions, powder and shot. There was little disparity in number, about seventy-five each side, but Tromp had a convoy of 150 merchant-ships which it was his first duty to protect.

Coming up the Channel with a wind between west and north Tromp, like a good seaman, had hugged the English coast and at daylight was 'a league and a half to windward of the weathermost of our ships, and of most of the fleet two or three leagues', says Blake. Blake, standing south-west, had only some thirty ships with him; Penn, with most of the Blue squadron, was in his station on the left wing ahead, but Monck with the White squadron, who should have been up on his right wing, and other ships, had lost ground during the night. Blake may well have wished he had had a signal which would have enabled to reform his fleet on a line to leeward. If Tromp had held his wind, he could have passed clear to the northward, and only a few of our best sailers could have reached his fleet, which, says Blake, 'had not been likely to have done much upon them'. Seeing Blake

1 Dr Anderson, *Mariner's Mirror* (1953), p. 171.
2 *First Dutch War*, Vol. IV, pp. 163 ff.

with less than half his fleet in company, Tromp left his convoy to windward, bore down and charged them.

Tromp may have hoped to liquidate Blake's thirty ships before the rest could reinforce him or strike at the convoy, but Florissen his rear-admiral[1] found 'several English frigates that were together opened a fearful fire on me from their five or six ships at once'; another Dutch officer, unnamed,[2] says 'they aimed always at our spars and never shot in a hurry'; and Evertsen the vice-admiral says[3] 'the two squadrons reduced one another to a condition of harmlessness, everything have flown to pieces so that we being to leeward could not carry out our purpose of boarding'.

Penn, according to Richard Gibson the purser of one of his ships,[4] on seeing the Dutch bear down in a body on the Generals, tacked with his division and 'stood through the Dutch fleet one way, as Sir John Lawson with his division did the other'. So should Dumanoir have acted at Trafalgar. Hot fighting followed, in which one of Penn's ships was boarded and captured by de Ruyter though retaken later; another was boarded by the Dutch who carried her forecastle but were driven out again; one was so much damaged that she had to be sunk by her crew; and the rear-admiral's flagship and two others were taken in to Portsmouth.

At four o'clock in the afternoon, says Tromp, 'we were obliged to bear away from the enemy, because seven or eight fast sailing frigates were bearing down on the merchant-ships, and it seemed probable that the whole convoy would be cut to pieces, fired and sunk unless we protected them'.[5] He left six crippled ships behind him, which we took; thirteen more ships and fifty-six merchant-ships were taken during the pursuit. Tromp and twenty-five or thirty of his ships, falling into the half-moon which suggested to Hoste his Order of Retreat, tried to cover the retreat of the convoy and the ships which were out of powder. It was not guns that saved them, but Tromp's good seamanship and Blake's dependence on pilots with too much caution and too little knowledge of the sands. Tromp remarked: 'we have seen in this engagement that divers of our captains are not as staunch as they ought to be; they did not second myself and their other honest comrades as the English did, for I observed that in attacking Blake that, before I could get at him, I had had such a welcome from three or four of his ships that everything on board us was on fire, and Blake was still unhurt.' Compare Blake's remarks after Dungeness. Tromp had also to complain[6] that whenever enemy ships had been taken, 'our own ships are

1 *First Dutch War*, Vol. IV, p. 180.
2 *Ibid.*, Vol. IV, p. 68.
3 *Ibid.*, Vol. IV, p. 188.
4 *Ibid.*, Vol. I, p. 15. *Granville Penn*, Vol. II, App. M, p. 615.
5 *First Dutch War*, Vol. IV, p. 118.
6 *Ibid.*, Vol. V, p. 48.

left defenceless in consequence of their crews leaving them and rushing on board the prizes to plunder them'; several ships left thus unprotected had been taken by the enemy with their prizes. He suggested that rewards should be offered for the capture and immediate firing of enemy ships. This letter marks a change of view, for the Dutch had hitherto kept to the old mode of attack by entering, the gun only as auxiliary.

The revised instructions issued by the Generals on 29 March 1653 laid the foundations of the Line of Battle.[1] In Art. 3, after the direction that each squadron shall take the best advantage they can to engage the enemy next unto them, they inserted the words: 'and in order thereto all the ships of every squadron shall endeavour to keep in line with the chief' or if the chief was disabled, the senior officer nearest the enemy. In the revision of 1665 the Duke of York, logically enough, embodied in the corresponding instruction the words 'according to the order (of battle) prescribed'; but those three words 'in order thereto' were dropped, and it was not long before their purport was forgotten.

Similarly, under Art. 6, if a flagship should bear away from the enemy flying the pendant indicating disablement, ships 'are to endeavour to keep up in a line as close as they can betwixt him and the enemy'.

In these two articles captains are told that they are to *endeavour* to keep in a line, but under Art. 7, if the admiral hoists the blue flag, being to windward of the enemy, ships to windward of him are to bear up into his wake and grain upon severest punishment; the admiral being to leeward of the enemy, if he hoists the blue flag and bears up, ships to leeward of him are not to bear up but to keep their luff and gain his wake and grain. The introduction of this signal was plainly the result of the need Blake found at the Battle of Dungeness to stimulate hesitating captains to get to windward, and at the Battle of Portland to re-form a disordered line to leeward without hint of retreat. As to the penal clause, Nelson, who needed to feel or to apply such a stimulus less than most men, wrote to a friend about an incident at Camperdown: 'As to myself, upon the general question, that if a man does not do his utmost in time of action, I think but one punishment should be inflicted.... I would have every man believe, I shall only take my chance of being shot by the Enemy, but if I do not take that chance, I am certain of being shot by my friends.'[2]

The use of the Blue Flag locked the ships addressed in a single line under the direct control of the flag officer hoisting it, until released by a further signal, such as the Red Flag which was the signal to engage. The Blue Flag was used by the Earl of Sandwich at the Battle of Lowestoft in 1665,

1 *First Dutch War*, Vol. IV, p. 262.
2 Nicolas, *Letters and Despatches*, Vol. III, p. 1.

when he led his squadron down out of the line to close the enemy, and by Prince Rupert at the Battle of the Texel in 1673 as a signal to the French squadron to bear down. Though not mentioned in our accounts, it seems to have been used before action at the Battles of the Gabbard and Scheveningen to rectify the line.

Art. 9 provided a signal for the flag officers to come up into the grain and wake of the admiral.

Art. 8, evidently suggested by the experiences of Bourne at Dover and Penn at Portland, illustrates the nature of the command the Generals were able to exercise. 'If the admiral will have any of the ships to endeavour by tacking or otherwise to gain the wind of the enemy, he will put abroad a red flag at his spritsail, topmast shrouds, forestay or main topmast stay. He that first discovers the signal shall make sail and hoist and lower his jack or ensign, that the rest of the ships may take notice of it and follow.' Again we find the word 'endeavour'. Distinguishing signals do not appear to have come into use till later, and did not appear in the Instructions till 1691.

The Battle of the Gabbard,[1] fought on 2 and 3 June 1653, gave our fleet an early opportunity of showing what it had learnt at Portland. It was a fair trial of strength between the two Sea Powers, for both had fully extended their resources, and there was no military project nor important convoy to distract either of the commanders from the object of defeating his opponent. Tromp wrote on 21 May:[2] 'Now that we shall have a goodly number, or the greater part, of the national ships gathered together, it behoves us to attack the enemy, the sooner the better; on the coming battle the glory of our country will in great measure depend.'

Our fleet,[3] including the ships which joined on 30 May and those brought up by Blake on 3 June, consisted of 101 ships of 26 guns or more, about ten ships to a division, with six smaller ships and four fireships. There were twelve great ships, nine serving as flagships; eighteen frigates; and seventy-one other ships, of which twenty-five were prizes and forty-two hired. Thus each division formed a team of ships of varying capabilities, with the flagship as spearhead; three or four great ships and frigates to support her; and a number of ships, prizes or hired, which could support their leader, but which can scarcely have been capable of reloading their guns except during a lull in the firing. Ships were to 'endeavour to keep in a line with the chief', but there was as yet no question of close accurate station-keeping. It was the same with the Dutch, for the instructions issued by

1 *First Dutch War*, Vol. v, pp. 21, 69ff and 116ff. Penn, *Jordan's Journal*, Vol. 1, p. 530. Dr Gumble, *The Life of General Monck*.

2 *First Dutch War*, Vol. v, p. 47.

3 Dr Anderson, *Mariner's Mirror* (1938), p. 446.

de Ruyter to his squadron on 23 July,[1] after the Battle of the Gabbard, were of the same character as Northumberland's instructions of 1636, except that they relate to support in boarding, rather than to support in gunfire.

The Dutch Fleet consisted of ninety-eight ships and six fireships, apparently in five squadrons and fifteen divisions. It is said that their ships were smaller and more lightly armed than ours. If so, the difference probably lay in the proportion of 18-pr. to lighter guns. The essential difference between the two fleets was that the Dutch still aimed at winging and boarding, while we relied on battering.

Neither side having a clue to the enemy's intentions, the two fleets spent May searching for one another all across the North Sea—not like Tiptoft in 1293 who arranged to anchor a hulk in mid-channel as a kind of mark-boat. The fleets made contact off the Gabbard on 1 June and at daylight next morning our fleet at anchor sighted the Dutch S.S.W. two leagues steering W.N.W. in a light northerly breeze. The English weighed and bore down, Penn with the White on the right wing, Lawson with the Blue on the left, Monck and Deane with the Red in the centre. The Dutch beat up towards them. Tromp says: 'finally they separated into three squadrons, a battle and two wings, sailing free at a good distance apart in order, as it seemed, to enclose us in a half-moon. Then, perceiving that we awaited them in good order, they again approached nearer each other, just coming in shot at eleven in the morning.' A Letter from the Hague says: 'they stayed upon a tack, having the wind, within twice cannon-shot (say half a mile) about half an hour, to put themselves in their order they intended to fight in, which was in file at half cannon-shot (say a cable), from whence they battered the Hollanders furiously all day'. A 'Letter from an Officer' quoted in Dr Gumble's Life of Monck[2] says: 'The Battel began betimes, with the Left wing of our Fleet, Lawson Admiral of the Blew Squadron, Jordan Vice-Admiral, Goodson Rear-Admiral, which Three passed through (being left by their Squadron about forty sayl) the whole of the Dutch Fleet, General Monck and Deane being passionate to come to our relief....' At a council called by Monck at sunrise next morning, he continues: 'it was then determined, by reason divers of the Blew Squadron had shew'd too much timorously the day before, that all the Flags should sayl abreast, having our General in the middle, resolving to pass through and scatter the Enemies' Fleet, or perish among them....'

It seems that Monck came to the wind to rectify his line, perhaps by Blue Flag signal, but that the new instructions had not been fully grasped.

Tromp also held a council, at which he found the greatest part of his captains 'so short of ammunition that we should be unable to continue the

1 *First Dutch War*, Vol. v, p. 319. 2 Gumble, p. 63.

fight today. . . . I purpose, therefore, to make one more sharp attack on the enemy and we shall then be forced to retire.'

There was a light S.W. wind which veered and freshened about 4 p.m. Jordan says: 'so that our frigates came up with and plied them so hard that those whose masts and sails were torn were soon seized on. Five of them in a huddle, being foul together, well defended themselves, though Admiral Tromp had left them.' Tromp says: 'Through the carelessness or lack of experience of several of the captains and their officers, several of us ran into one another and were thrown into confusion, and were also surrounded by some of the quickest sailing of the enemy's frigates and captured, and some were also cut off from us.' The 'Letter from the Hague' adds: 'The second day the English still battered them in file, and refusing to board them upon equal terms kept them at bay but half-cannon distance, until they found some of them disordered and foul one against another, whom they presently boarded with their frigates (appointed to watch that opportunity) and took.' And Lyons the minister of the *Resolution* says: 'Our fleet did work in better order than heretofore, and seconded one another.'

The Dutch lost nineteen or twenty men-of-war: we took eleven and sank six; two blew up due, says Tromp, to carelessness, and one sank with them. We had 126 killed, including General Deane and two captains, and 236 wounded. Twelve 'lame and disabled' ships were sent into the Thames with the Dutch prizes; seven from the Blue squadron, two from the Red, and three from the White.

Brief and bare as are the accounts of the battle, they seem to show that our captains had made more progress in the art of handling their ships in line than their opponents. To this our victory was due. But we took two days over the job, about nine hours each, and thus allowed Tromp to conduct his beaten ships into safety behind the sands. The frigates, though evidently loosed in pursuit, could not complete the job without heavier support. For quick results, something more forcible was needed than 18-prs. at half cannon-shot, with an overall output of about two rounds per gun per hour.

Perhaps the Generals thought so too: for the Battle of Scheveningen,[1] 31 July 1653, was fought in four 'bouts' on opposite courses. This mode of fighting must have suited a large mixed fleet, for it enabled the lesser ships to discharge their broadsides without being 'torn in pieces' by heavier ships[2] and gave them time to reload in the intervals while the fleets were getting about on the other tack.

The English Fleet maintained a blockade of the Dutch coast in full

1 *First Dutch War*, Vol. v, p. 347 ff.
2 Boteler, *Dialogues*, p. 256. (N.R.S. Vol. LXV.)

force till 29 June, when it returned to Sole Bay to store and land its numerous sick. The sick included Blake, who was still in great pain from his wound. The fleet resumed its watch on the Texel on 18 July, with Monck alone in command. He had with him 110 sail, including his twelve heavy ships and twenty-two frigates, four more than before.[1]

By great efforts the Dutch had restored the number of their ships; Tromp, in the Maas, had eighty-eight ships and four fireships; de With, in the Texel, twenty-four and four fireships. Tromp left the Schooneveld on 28 July and next morning sighted the English fleet off the Texel. About 11 a.m. the wind veered to north-west, giving the English the wind; Tromp turned to W.S.W. 'to bring them off from the Texel shoals, so that the warships lying there might have the opportunity of coming out and joining us'.

Jordan's journal says: 'We chased; the frigates flying before us came to engagement about five in the afternoon, the General, Vice-Admiral and Rear-Admiral about six at night.' Sacheverell of the *Portsmouth* frigate says: 'All the frigates made sail and by 6 in the evening some twenty of us fought with them at a distance.'

So Prince Rupert, in issuing his instruction after the Four Days Fight, was confirming or reviving the practice of his predecessors.

The action continued till about 9 p.m., without, says Tromp, 'their getting any sensible advantage of us, or we of them, as far as we could see'. About 11 p.m. Tromp turned to the eastward, unperceived by us, and in the morning had got to windward and made his junction with de With and the Amsterdam squadron from the Texel. It was blowing hard from the W.N.W. and both fleets, as Monck says, had work enough to get off the lee shore.

At daylight on the 31st the wind had backed to the south, off shore, with fair weather and little wind. The two fleets were steering about W.S.W. the Dutch a mile to windward and somewhat abaft the beam of their opposites. Penn with the White was on the right, Monck with the Red in the centre, and Lawson with the Blue on the left. The order of the Dutch Fleet is somewhat obscure: de Ruyter was on the left, followed by Evertsen his vice-admiral, then Tromp. Vice-Admiral de With, with the Amsterdammers, apparently followed Tromp, and Florissen the Scout-by-night was in the rear.

About seven the Dutch began to bear down, and Monck in the *Resolution*, seconded by the frigate *Worcester*, 50, tacked to meet them; 'each division', says Jordan's journal, 'followed. Most of the enemy weathered us, the rest were scattered.' De With says: 'In the first onslaught, more than half

1 *Mariner's Mirror*, Vol. XXIV (1938), p. 449.

our ships got to luffward of the enemy, whilst we and the rest of the ships remained to leeward of them.' The fullest account comes from Cubitt of the frigate *Tulip*, 32, who during the last three bouts was close astern of the General, having been warned to follow him. 'We tacked upon them and went through their whole fleet, leaving part on one side and part on the other side of us...as soon as we had passed them we tacked again upon them and they on us, passed by each other very near.' After passing one another in the second bout: 'both tacked, the Hollander having still the wind and we keeping close by...we cut off this bout some of his fleet which could not weather us and therefore forsook him...some of them were sunk and we had the *Oak* (32) fired by one of their branders. We tacked again upon them and they upon us and this bout was most desperately fought by either almost at push of pike.' A Flushinger tried to board the *Victory*, vice-admiral of the White, but was beaten off and sunk. 'Two of their Admirals coming up close to the *Resolution* and had much ado to weather her, at which time the very heavens were obscured by smoke, the air rent with a thundering noise, the sea all in a breach with the shot that fell, the ships even trembling and we hearing everywhere the messengers of death flying; eight or ten sail of his ships not being able to weather us forsook their fleet. We tacked again upon them but they, having had enough of it and their heads looking to fathers-land-ward, thought it not safe to tack any more.'

The details are obscure, but the broad outline is fairly clear. Though the French gentleman quoted by Hoste[1] says he saw the two fleets drawn up on well-connected parallel lines extending above four leagues N.N.E. and S.S.W., as indeed they would appear if seen on or over the horizon, the lines were not lines of ships so much as lines of flagships, as laid down in the council held at the Battle of the Gabbard. Homeric combats took place between the opposing flagships, with such support as seconds like Cubitt in the *Tulip* gave. The form of battle was that indicated in Northumberland's directions of 1636 or in de Ruyter's instructions of 27 July. Each English flag officer stood up for the Dutch flag officer opposite him, supported by his seconds, exchanged broadsides, forced his way through the lesser vessels supporting him, taking care not to be run aboard, and resumed the action on the other tack, trying to gain the wind of his opponent. The first bout began about 7 a.m., the second about 9, the third about 11, and the last soon after 12 noon. Towards 2 p.m. the Dutch were in retreat. Jan Evertsen and de Ruyter, with ten other ships which were still to windward, made for the Maas. De With, unable to get to windward of the enemy, signalled to the ships to leeward to come up with him, but some

1 Hoste, *First Part*, ch. x.

twenty-five of them ran for the Texel before the wind, now veered to W.S.W. Thus Monck saw before him but sixty ships and only one flag officer. Of the nine or ten flagships six or seven had been sunk or disabled involving the defeat of the groups they led.

It is worthy of note that the English ships were very short of powder, but most of the Dutch ships had more than half remaining.

The Dutch fought stoutly, but with the loss or disablement of their principal Flag Officers, they fell into confusion. Eighty-four got into the Texel, twelve into the Maas, and sixteen were sunk. Monck thought we had sunk forty ships, Jordan twenty. By Monck's order, we seized no prizes, but we took 1000 prisoners, including Rear-Admiral Cornelis Evertsen. Besides these, the Dutch are said to have had 1200 killed, 1500 drowned and 2500 wounded. Our losses are said to have been 300 killed, including two flag officers and five captains, and 700 wounded: double those in the two days' fighting at the Battle of the Gabbard.

Though the manner of fighting seems to have followed the traditions of the past quite as much as the Fighting Instructions, the Generals-at-Sea must have found them adequate, for they were re-issued in March 1654 with only a few verbal alterations.

The Admiralty Committee seem to have been equally satisfied with the composition of the fleet. In 1654 we completed eight more 50-gun frigates of about 750 tons and six more 40-gun frigates of about 550 tons. Between 1655 and 1664 we built six ships of 60–70 guns of about 1000 tons, fit for use as flagships of divisions, rebuilt some of the old greatships, and built two more 50-gun frigates.

The Dutch, however, began to build two-decked ships of 60–70 guns which outclassed our heavy frigates.[1] They were of about 1000 tons, as big as most of our three-deckers, with a beam of 38–40 feet; they carried their lower-deck gunports 4 feet from the water and stowed four months' provisions. Our 50-gun frigates carried their ports little more than 3 feet from the water and stowed for ten weeks.[2] These Dutch ships were the fore-runners of the 74-gun ships which were to form the bulk of the lines of battle in our wars with France.

Note 1. *Fireships.* A story repeated in various accounts of the Battle of Scheveningen states that the *Andrew*, Rear-Admiral Graves, flagship of the easternmost division of the White squadron, and the *Triumph*, Vice-Admiral Peacock, flagship of the adjoining westernmost division of the Red squadron, were attacked by fireships and fired, but saved by the

1 *List of Ships*, S.N.R.
2 *Pepys' Naval Minutes*, p. 241. (N.R.S. Vol. LX.)

exertions of their crews, led by their Admirals. Graves indeed was killed, and Peacock died of his wounds. These two divisions are those most likely to have fetched Tromp's division in the first bout, and four of the fireships were under his orders. Sacheverell of the *Portsmouth*, 50, White squadron, says that during the first bout the Dutch 'fired three or four of their fireships, but (blessed be God), they did us no hurt'. The *Worcester*, Monck's second in the first bout, was also reported burnt by fireship. But all three ships appear in the list of those in Aldborough Road ready to sail for Holland on 29 August. The story seems to be a later invention. The two ships lost by fireship were the *Oak*, 32, and *Hunter*, fireship, both of the Blue squadron.

Monck should have the last word. According to Dr Gumble, on some occasion unspecified, he 'answered with indignation, The very Powder of the Guns of this ship is able to blow a Fireship from it' (*Life of Monck*, p. 57).

Note 2. *Death of Tromp.* A Dutch report in the Penn papers says (*Memorials of Penn*, Vol. 1, p. 506): 'By seven of the clock, Tromp was slain, being shot in the left pap with a musket-shot from the ship that bore the white colour, the first or second broadside.' According to the Dutch 'Relation', it was after the second bout, about 11, that the Admiral gave a signal for the chief officers to come aboard him, and de Ruyter found Tromp dead in his cabin. Jan Evertsen, who should have succeeded him, was probably already on his way to the Maas in his disabled flagship. When 'the sun was in the south' de With learnt that Tromp was dead and took command.

(*To be continued*)

STORM AT SAMOA

By Oliver Warner

I

IF turning points in history can seldom be neatly decided, the beginnings of great movements can sometimes be discerned in particular incidents. Stevenson, for instance, saw the awakening of Americans to the importance of sea-power not through the writings of their celebrated Admiral Mahan, but in a hurricane at Samoa, the aftermath of which he beheld with his own eyes. The sequence of events has its excitement, and as the consequences of the awakening have been vast, and are likely to be lasting, it may be worth tracing.

In February 1889, when her Majesty's corvette *Calliope*, Captain H. C. Kane, R.N., arrived at Apia, Samoa, she added to a tense scene. There were American and German men-of-war already in the harbour; Kane represented a third maritime Power interested in Samoan affairs. The Americans had a coaling-station at Pango Pango nearby and the Germans, who were present to protect valuable trade concessions, had just asserted a right to search all shipping. This was resented, and the German position was not made easier from the fact that they had recently been worsted ashore by Mataafa, a Samoan chief unfriendly to their pretensions. They had suffered heavy casualties, and were smarting.

Kane, a commanding personality, was exactly fitted to the situation. He had wide experience of the navies of other nations; he was an Irishman of charm as well as of resolution, and his first line of conduct was to try to ease strain by a round of well-contrived entertainment. The Samoans were keen cricketers; so were the British. The Americans liked fun; so did the British. Only the Germans were difficult to please. Then Kane heard one day that they were holding a council of war in their biggest ship, the *Olga*. He acted quickly. While conference was in progress, he arrived alongside without warning, and was received by a startled officer of the watch. He walked at once towards the great cabin, and dumb-founded the assembled Germans by his presence. Expressing concern that he had not been invited to the conclave, as representing a friendly Power, he informed the German commodore in the plainest terms that he knew of his intention to attack Mataafa, in revenge for the reverse suffered.

'How do you know?' asked the German consul, who was among those present.

'By *that*', said Kane, placing a firm finger on a map spread out on the cabin table. He further indicated the significance of the presence not only of the consul, but of the commanding officers of all German ships at Apia. They were not there for nothing.

The commodore, who was a sensible man, confessed at once that Kane was right, and added that they had hoped to keep the attack a surprise from everybody.

'And who, pray, is to stop us?' asked the consul insultingly.

Kane, turning studiously to the commodore, replied: 'When language of that kind is used, it is often referred to a kind of arbitration which is stronger than either sarcasm or vituperation.' He knew the consul for a man of the most uninhibited language.

Kane then left the ship, but, spurred on by their shore authorities, the Germans did in fact proceed with their plan. They weighed in the darkness the same night, but Kane, who had expected this move, ordered a small vessel, H.M.S. *Lizard*, which was temporarily under his charge, to follow them out of the harbour without lights, and her commander was told to place himself between the Germans and the shore position chosen for assault. The job was done perfectly. British flags were planted on key sites throughout the target area, and the whole German scheme was spoilt.

From then onwards, the black-bearded Irishman dominated Apia. The next incident merely confirmed his authority. A British steamer, the *Rockton*, arrived one day in the harbour. The Germans, asserting their right of search, sent a party to her. Kane ordered two boats alongside, after the Germans were already aboard, and trained the *Calliope*'s guns on to the ship immediately concerned. The German commodore instantly recalled his boats, leaving the boarding officer to return—under British care. The Americans, who had eagerly followed the whole episode, manned their yards in compliment to Kane. One of their bands even struck up 'Rule Britannia'.

II

On 15 March 1889, when tension ashore was at its height, nature herself took a hand in affairs. It was in a way such as would test the seamanship and endurance of all parties.

There were at that time seven men-of-war at anchor in Apia harbour, together with a number of merchantmen and small craft. America had three ships: the cruiser *Trenton*, flying the flag of Admiral Kimberley, and the corvettes *Vandalia* and *Nipsic*. The Germans had the cruiser-corvette

Olga, and two smaller ships, the *Adler* and the *Eber*. Great Britain's *Calliope* was named after the muse of the heroic epic, and in view of what followed, some details of her construction may be of interest.

She was of 2770 tons displacement. She was triple-masted and could sail. Her structure was steel and iron, wood-cased, with an oak rudder. Her length was 235 feet, and her extreme breadth 44 feet 6 inches. She was built at Portsmouth, and was on her first commission. Her engines, which were in charge of Mr H. G. Bourke, were made by J. and G. Rennie, of London. This was a famous firm. Its founder, John Rennie, had designed Waterloo Bridge and the Plymouth breakwater. His sons, George and John, who completed these and other works of importance, had later gone into the railway and general engineering business. Both had died some years before the *Calliope* was fitted-out, but their tradition was well maintained. The corvette could develop 3000 horse-power, with a speed of 13¾ knots, or, under forced draught, of nearly 15.

Earlier in the month Samoa had had a gale, which the ship had ridden out without dragging, though Captain Kane raised steam as a precaution. While at Apia, the *Calliope*'s anchors lay east and west of the ship, with a clear hawse to northward, and a kedge astern to keep her head to the swell. During the day in question there had been warning of bad weather. The barometer fell, with heavy rain but no wind. Then it rose, and continued to do so for some hours, when again it fell sharply.

Experienced people ashore held the view that the fall was for rain, but the *Calliope*, in common with the other men-of-war, struck lower yards and top-masts, and raised steam, so as to be ready for emergency. Under some conditions Apia became almost untenable. 'The formidable surf of the Pacific thunders both outside and in', wrote Stevenson in *A Footnote to History*. 'There are days when speech is difficult in the chambers of shore-side houses; days when no boat can land, and when men are broken by stroke of sea against the wharves.'

Afternoon wore on, and it became clear that local opinion erred. No birds flew seaward; large shoals of fish swam out of the harbour. The wind was now from the north-east, blowing almost directly into the harbour-mouth, creating whirl-pools between ships and shore. Gradually it freshened. By midnight it was blowing a gale, which increased in force all through the middle and the morning watch. According to a storm-track worked out later by an American meteorologist, the centre of the hurricane in fact passed directly over or very close to the harbour, while far away to eastward another was forming in the Coral Sea.

During the anxious hours of darkness, little manoeuvring was possible, since nothing could be seen but the wildly swinging lights carried by each

ship. By daylight of 16 March the wind had hurricane velocity. It continued at that pitch for nearly twenty-four hours. The *Calliope* was now dragging near to the reefs. Already one of the other men-of-war, the German *Eber*, had gone down with the loss of all hands except five. She had damaged her screw some weeks before the storm, and her anchors would not hold.

The *Calliope* had steam on all boilers, and for some hours was able to keep clear of the reefs. It was otherwise with the *Adler*, though by good management the Germans slipped their cables at the best time. The ship was lifted high upon the strand, instead of sinking in deep water after being holed and battered, like the *Eber*.

By 8 a.m. the situation of the *Calliope* was critical. The U.S. ship *Vandalia* was then drifting down on top of her; the *Olga* was close by her starboard quarter, and had already scraped her side; the distance from the reef on the port quarter had at one time narrowed to a matter of feet—as few as six, some estimates say.

At 8.30 the port cable parted, leaving only the starboard bower. The *Calliope* swung against the stern of the *Vandalia*, carrying away the jib-boom and all the fastenings of the bowsprit. The *Olga* then came up on her starboard side and nearly rammed her. Captain Kane managed to steer clear, damaging the corvette's fore-yard, which boomed the *Olga* off.

It was now that Kane showed what the Lords Commissioners of the Admiralty later described, with justice, 'nerve and decision'. It had become a question of whether he should slip his remaining cable, and try to beach the ship on a sandy stretch, as the *Olga*'s captain later succeeded in doing, or steam into the teeth of the wind towards the open sea. In considering the latter course, Kane had to reckon with the fact that the U.S. *Trenton*, a large cruiser, was now helpless, her rudder damaged, her engine-room flooded and her fires put out, facts which he knew by signal. She was clean in the fair-way, which at its narrowest was a mere three cables wide.

Soon after 9 a.m. Kane called on his chief engineer officer for every pound of steam he could raise. At 9.30 he slipped. Little by little the *Calliope* gathered weigh. Under her full power, with forced draught, she could make less than one knot: indeed, at one stage of her outward passage the American admiral reckoned she took more than two hours to cover less than four cables—little over 600 yards. The seas came over green, flooding the upper deck, deluging the first lieutenant, with his look-outs, who were stationed at the forecastle. The steam steering gear was uncertain, but with ten men at the wheel, and the ward-room crowded with blue-jackets hauling on a pair of ropes made fast to the tiller to relieve the strain, the ship could be steered manually. She passed close to the *Trenton*, so close indeed that her fore-yard came over the American's quarter-boat; she turned

head to wind. As the *Calliope* slowly left the *Trenton* on her way out, the American seamen gave her a cheer.

Rennie's engines, parts of which were red hot, worked without hitch, though the screw raced at every upward lift of the stern. They developed as much power as they had ever done on trials, yet so great was the force of wind and sea that for hours on end they only gave the ship just enough margin. If they held, she might be safe; if they faltered or were eased, the ship would fall off, and so thick was the weather that she might well be upon the reef, which skirted the whole island shore, before the captain knew it. One of the midshipmen, sent aft to report how near they were, said later: 'the sight appalled and fascinated me; one moment I was looking at the reef, which was like an exposed cliff, at another I saw nothing but a seething cauldron'.

Mr Bourke drove his engines at full stretch for more than eleven hours. He and his men were on duty sixteen hours continuously, in intense heat. Fortunately, they had Westport coal for the furnaces, which was the best available. At 4 p.m. the first lieutenant shook out the jib, but it was blown away. He then tried the fore-stay-sail, which held long enough to help steer the ship, though by 5 p.m., when she was out of immediate danger, that went too. By 5.15 they were clear of land. Three hours later, although it was blowing as hard as ever, the waves had moderated slightly, and Captain Kane was a last able to ease his engines. By noon on the 17th the wind had decreased to the strength of an ordinary gale. A passing glimpse of the sun showed that they were then some sixty miles north east of Apia.

On 19 March the ship was able to return to Upolu under steam and sail. She stood off Apia harbour, which Captain Kane judged to be still dangerous, put to sea again for the night, and anchored at last on the morning of the 20th. The place was devastated. Of the seven men-of-war afloat on the 15th, the big *Trenton* was under water to her main deck; the *Vandalia* showed only her fore-mast, her funnel, and a few feet of her bow. The *Olga* and the *Nipsic* were some feet in the sand, but might possibly be re-floated; and the *Adler* was lying on the reef. As the *Eber* had been an early loss, the *Calliope* was the only ship still seaworthy. She had lost five boats—a jolly-boat, dinghy, skiff, cutter and copper-punt—she had damage to spars and upper-works, and she had only one anchor; but she could steam, and with the exception of a carpenter's mate, who had had his face battered, she had no casualties.

Captain Kane coaled ship, and on 21 March he weighed, saluted Admiral Kimberley with thirteen guns, and sailed for Sydney.

III

The events of the hurricane stirred the world in a way which no amount of local jockeying for diplomatic advantage could ever have done. So much greater were distances in those days that *The Times* did not print the news until the beginning of April. It then reported the *Calliope*'s escape, and remarked on the great effect which the disaster had had upon the young German Emperor, Wilhelm II.

During the weeks following the storm, the shipwrecked sailors gradually returned home. Only two of the vessels could be refloated, the rest were left derelict at Apia, to be dissolved in due course by the sea, the Samoans, and the hand of time. A conference of the Powers concerned was meanwhile summoned. Statesmen met at Berlin in chastened mood. Bismarck replaced the aggressive consul, and as early as 14 June 1889 an Agreement was signed which declared the Samoan Group of islands to be neutral territory. It was arranged that there should be a Supreme Court of Justice for foreigners, with a presiding judge from the United States.

With modifications and minor changes, affairs lasted thus for some ten years. They were uneasy, for although tension between the Maritime Powers relaxed, the doughty Mataafa remained a problem. Although he had long shown statesman-like qualities, yet until the second Treaty, that of 1899, made between the United States, Germany and Great Britain, he was not officially countenanced. Supreme as he was in his influence with his fellow Samoans, to Europeans at Apia he was, nominally at least, almost an outlaw.

By the time of the second Treaty, which gave administrative power in western Samoa to Germany, and in the eastern islands to America, the Germans, though they had their difficulties with him, and were once at least constrained to send him into exile, had the good sense to conciliate Mataafa. When he died, in 1912, it was generally recognized that a great man had passed away, perhaps the greatest Samoan of his time.

The German regime lasted until the war of 1914–18. At the end of the first month of the conflict, western Samoa was occupied by New Zealand military forces. So great was the respect shown by the belligerents for one another, so sincere their interest in the well-being of the Samoans, that no fighting took place. As for the islanders, they were much impressed by the submission of their German administrators to the newcomers, and the change in affairs was effected with small disturbance.

The Trusteeship of New Zealand was confirmed in the Peace Treaty after the First World War, and it has continued unbroken ever since. It was re-affirmed by the General Assembly of the United Nations after the Second World War.

IV

There were two outstanding personalities in the hurricane of March 1889: Captain Kane and his engineer officer. The Admiralty was not slow in recognition. 'My lords', said the official letter, 'desire to express their thorough appreciation of the skilful seamanship and of the measures taken throughout to secure the safety of the ship.' Their approbation was in as handsome terms as such official documents ever carry: but what warmed Kane more was a note he received from Admiral Kimberley, immediately after his return to Upolu. 'You went out splendidly', wrote Kimberley, 'and we all felt from our hearts for you, and our cheers came with sincerity and admiration for the able manner in which you handled your ship. It was a gallant thing, and you did it so well it could not have been done better. We could not have been gladder if it had been one of our own ships, for in a time like that I can say truly with our old admiral, Josiah Tufnell, 'that blood is thicker than water''.'

Kane had long been a noted man. Before his death in 1917 he had risen to the rank of Admiral, and was a K.C.B. His first lieutenant, McAlpine, later graced the post-captain's list, while his Chief Engineer, the stalwart Mr Bourke, on whom all had at one time depended, was appointed Fleet Engineer very shortly after the episode at Apia, a rank which was virtually the top of his tree. His subordinate, Mr Milton, also rose high in his profession, while several of the *Calliope*'s executive officers later attained flag rank.

R. L. Stevenson summed up the effects of the hurricane in a prophetic sentence. He called it 'a marking epoch in world-history: directly, and at once, it brought about the Congress and Treaty of Berlin; indirectly, and by a process still continuing, it founded the modern navy of the States. Coming years and other historians will declare the influence of that.'

In a sense, the cheering of the *Calliope* by the *Trenton* as she steamed away into the open sea was symbolic. Great Britain was then enjoying a high hour in her destiny; that of America was about to come. Both nations would be challenged and endangered by the Germans, and would twice defeat them. The tradition of sea-power built up during the course of the eighteenth and nineteenth centuries by the Royal Navy would be taken up by America in the twentieth.

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THE LADBY SHIP ANCHOR

By Carl V. Sølver, M.M.

IN the course of the excavation of the Danish Viking ship at Ladby, Funen, Denmark, in 1937 there came to light a well-preserved anchor of iron with chain and rope cable (Plate I, fig. 1), a find which provides a valuable contribution to the knowledge of ships of the Viking age. Stone killicks (Old Norse: 'stjórar') of course had been known from time immemorial in Scandinavia, made in many different ways, and it is presumable that iron anchors with two arms and a wooden stock were introduced from the south for use on the vessels of the chieftains long before the Viking era. The Old Norse expression for it was 'akkeri', a word occurring in modern Faroese in the form of 'akker', which means an anchor of iron in contrast to a stone anchor, 'ilasteinur'.

Doubtless the word 'akkeri' derives from Mediterranean expressions for anchor; moreover, the pictures of anchors appearing on the Bayeaux tapestry are not different from anchors to be seen on the Trajan column in Rome.

In his description of the Nydam ship, found about 1860 at the Nydam bog, Southern Jutland, Denmark, which is dated to about A.D. 400, Conr. Engelhardt mentions an anchor of iron which is spoken of as being like ordinary anchors, and I assume that it was of the same size as the Ladby anchor. Unfortunately, this valuable piece of ship's equipment was stolen during the Danish war with Germany in 1864 and has entirely disappeared. The Nydam ship fell a prey to the Germans and is now exhibited in the University Museum, Flensburg. The earliest iron anchor in Scandinavia was unearthed together with the Oseberg ship in Norway, which is thought to date from about A.D. 800; it weighs 9·8 kg. and is to be seen in the Bygdø Museum in Oslo (Plate I, fig. 2).

The Ladby anchor, which is considered to be a hundred years later, resembles the Oseberg anchor and like it has both an anchor ring and a buoy ring; but besides being about three times as large as the Oseberg specimen, it has several characteristic features which distinguish it markedly from the Norwegian anchor. One remarkable thing, for instance, is the Ladby anchor's small, strong flukes at the ends of the arms. Mariners in those days would undoubtedly know the advantages of broader flukes, which had long been used in southern Europe, but the forging of them was possibly a matter of too much difficulty. We cannot say for certain at which

time broad-fluked anchors were introduced into Scandinavian shipping, but the picture of a ship in Skamstrup church at Holbaek, Denmark, from about 1370, includes a fully developed anchor with a stock of the usual length as well as broad flukes hanging at the bow.

Under the auspices of the National Museum, Copenhagen, I made an examination of the Ladby anchor on the ship itself. The anchor, chain and rope lay forward in the ship just as is shown by the photograph taken in 1937, and as they are now exhibited in the funeral mound of the chieftain (Plate I, fig. 1). In all probability the anchor was cleaned of rust and oxides on

Fig. 1. Fresco of ship from Skamstrup church, Holbaek, Denmark, from about 1370.

that occasion, but the chain was not; it lies in a heap partly rusted together, doubtless impossible to straighten out without injuring the whole. My conjecture is that the chain consists of about fifty links and that its length is about 10 m. Under the chain lies the anchor rope, but the most of it is so ravelled and decomposed that it cannot be got out and measured.

According to the original report on the find the rope is of bast, and this is undoubtedly correct. The measurements of the anchor and the links of

the chain are shown in Fig. 2, though it should be observed that the anchor is drawn as it is now in its cleansed state. When cleaned the chain links, which are much more corroded than the anchor, will only weigh about

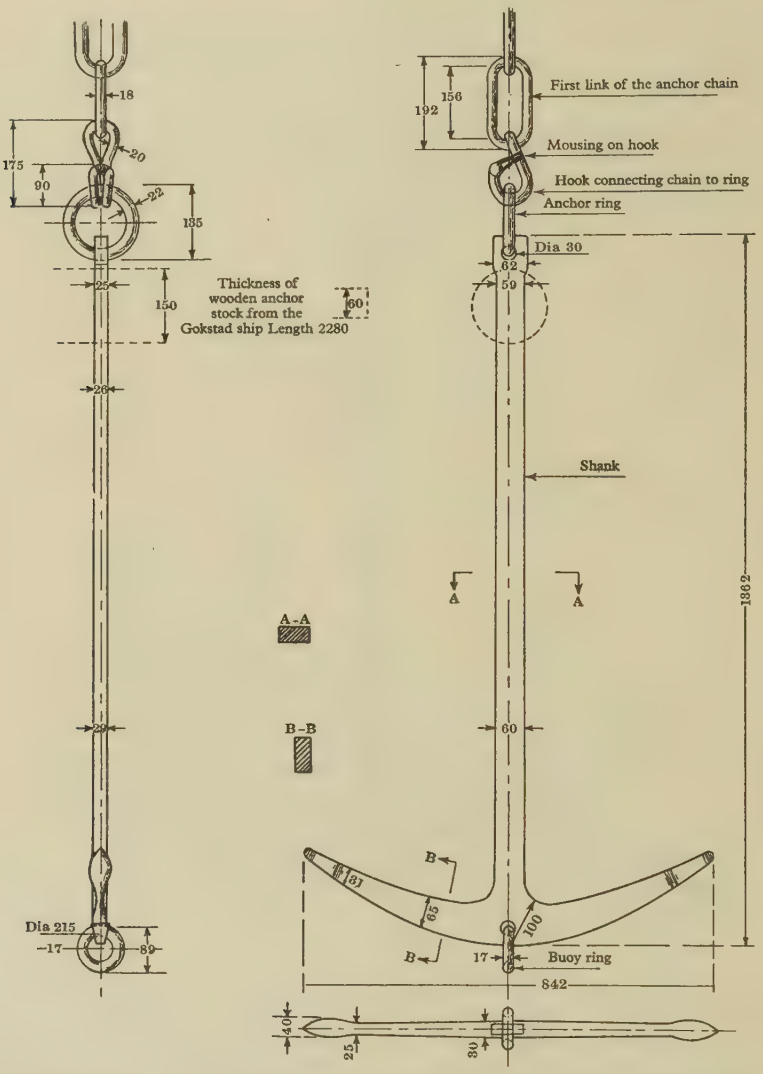

Fig. 2. Scale drawing of the anchor found in the Danish Viking ship at Ladby; the anchor is shown as it is now, cleaned of rust, etc. The hook and chain links are shown in the dimensions they are supposed to have had originally. (Measures in mm.)

150–200 g. each, whereas originally they must have weighed about 850 g. It is their supposed original appearance that is shown in the drawing.

Fig. 1. Anchor and chain of the Danish Viking ship at Ladby, Funen, Denmark, lying in the forepart of the ship as found at the excavation 1937.

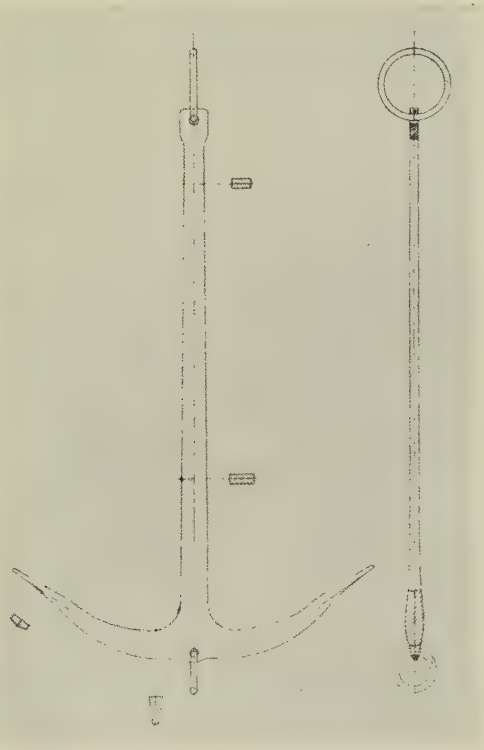

Fig. 2. Iron anchor from the Oseberg ship, now at the Bygdø Museum, Oslo. Weight: 9·8 kg. Length: 1·2. Space between flukes: 0·65.

(*Facing p.* 296)

Fig. 1. Link of anchor chain of the Ladby ship as it appeared in the grave-mound prior to being cleaned of rust and oxidation. 10 × 20 cm. outside measure. Weight: 625 g.

Fig. 2. Same chain link as above cleaned of rust and oxidation: (*a*) the welding place; (*b*) place mostly corroded. Weight: 150 g. Max. thickness: 12 mm.

Considering it of much interest to ascertain wherefrom the anchor and chain originated, the Government Testing Laboratory undertook a microscopic analysis of a number of samples taken from the ends of the link and also from the two sides. The material was found to consist of wrought steel with a carbon content varying from about 0·30% to about 0·80%. Accordingly, it is not improbable that the chain was made of material imported from Sweden, as even then it is presumable that steel blocks, the so-called 'Åssmundts', were used as currency.

On both sides of the taper at (*a*), up to 4 or 5 cm. from this spot (*a*) traces were found of welding and of some material, consisting of very soft, almost carbon free welding iron with a high phosphoric content.

The analyses thus show that the link was made of pure wrought steel, and that the link was joined by welding on a soft, somewhat impure iron whose high content of phosphor and nitrides suggests that it was made from Danish bog or lake iron ore. Judging from the form of the remaining metallic iron it is probable that the bent wrought steel was tapered at the two ends at (*a*), whereafter the joint was made by welding on some ordinary soft iron, which indicates that the smith was aware that the harder, carbonaceous material was not well adapted for forge welding. The welding extended considerably on both sides of the taper.

It seems to appear from these detailed examinations and analyses, that the anchor chain links were made of Swedish steel and that the links were ingeniously welded with the aid of Danish bog or lake iron ore.

Even on modern standards the anchor of the Ladby ship is a very good piece of ship's equipment and at the same time an unusually fine piece of handiwork. Apparently it was forged out of two large pieces, the shank and the arms, which had previously no doubt been made up of several welded rods in the same manner as anchors were manufactured up to the middle of last century. Forging and welding seem to be perfect in every detail; the various parts are handsomely and accurately proportioned and symmetrically planned, and the uniform gauge of the various members—not obtained by filing, be it noted—is a feature of the whole anchor.

In appearance the Ladby anchor very strongly recalls the iron anchor from Caligulas' ship (about A.D. 40), discovered when Lake Nemi in 1931 was emptied. That anchor was peculiar in that the shank and arms were reinforced by oak deals (Fig. 3); compared with modern anchors, the Ladby specimen like the Nemi one is relatively long and slim, and therefore it might similarly have been reinforced. However, neither on the Oseberg anchor nor on that at Ladby is there any indication to support such idea, and I must assume that the anchor originally appeared as it does now, apart from the corrosion. With its two rings the Ladby ship anchor now

weighs 27·95 kg., and as the rust formation was considerable, presumably about a third of the original weight, I suppose the Ladby anchor originally weighed about 40–50 kg. Unfortunately nothing is left of the anchor stock (old norse 'stokr'), but in all probability it was of oak, that being the heaviest and most substantial wood in Denmark, and in appearance and size it would be like the anchor stock of the Gokstad ship preserved at

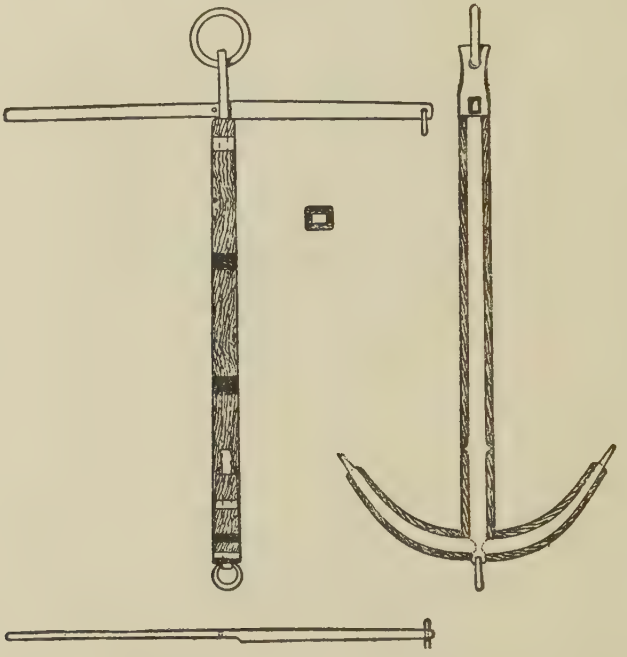

Fig. 3. Scale drawing of the Roman iron anchor from the Lake Nemi find, showing reinforcements of oak on shank and arms and the removable anchor stock. 414 kg. without wood. From G. C. Speciale, 'The Roman Anchors at Nemi', *The Mariner's Mirror*, Vol. XVII (London, 1934).

Bygdø Museum, Oslo. The stock was placed on the shank at the uppermost expansion of the shank, as shown stippled on the drawing (Fig. 4). To the modern eye this stock seems to be much too large for this anchor, of which the shank measures only 1·30 m. in length. On all the anchors we otherwise know of, the stock is no longer than the shank, as is the case today; but there is one exception, that of the Oseberg ship, of which the stock measures 2·28 and the shank only 1·2 m. As the stock found in the Gokstad ship is also of considerable length in relation to the size of the ship, there would thus seem to be reasons for thinking that the anchors of Viking ships had that peculiarity, one that is very useful. It is true that it makes the anchor

less handy, and for that reason can only be used conveniently in smaller sizes, but such an anchor takes an exceptionally firm grip of the bottom.

The rope (old norse 'strengr', 'tog', 'lina') was presumably made of bast. As far as I could see from the very sparse and obscure remains, the rope is right-hand-laid three-cored rope, and not cable-laid like the anchor ropes of later times.

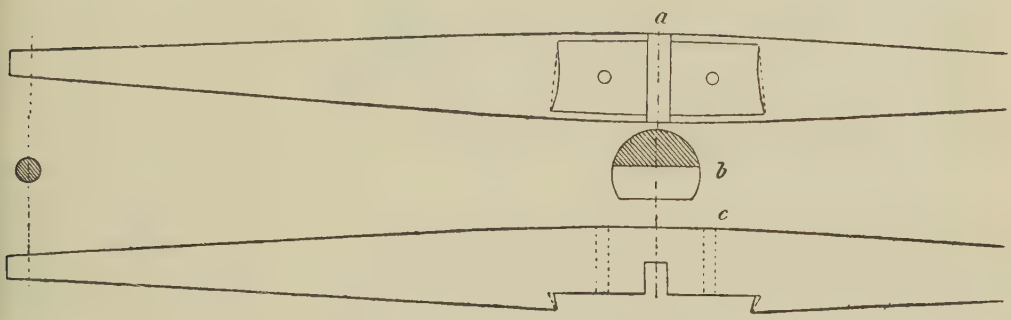

Fig. 4. Anchor stock of oak from the Gokstad ship found at the excavation in 1896, now at the Museum at Bygdø, Oslo. 2·28 m. long; 0·06 m. thick. (*a*) Square hole for anchor shank; (*b*) profile of middle part of stock; (*c*) holes for wooden pegs securing the lock piece.

The Ladby ship's anchor chain is literally a unique find, as no others have been discovered earlier than the beginning of the nineteenth century. The links are rather large, of course without studs, and are very like those of which the first modern anchor chains were made. The connexion between the anchor ring and the chain, for which a shackle is now used, is a very curious hook, one not seen elsewhere. It is made of round iron of the same dimensions as the links, and in reality is a long link bent into the shape of a hook (see Fig. 2). At the top the hook is closed ('moused') with a wire lashing of fine, twisted wire, presumably right-hand-laid bronze wire.

However, the chain of the Ladby ship must not be taken to be a regular anchor chain in the modern sense, but as a 'forerunner' on the anchor rope, which naturally now lies under the chain just as the mooring originally was coiled in the bow of the ship when the funeral took place. A chain forerunner on an anchor rope, such as we now see it for the first time in the history of anchors, was an extremely practical device. The weight of the chain keeps the anchor from lifting from the ground, the pull on the mooring is much more elastic than when the whole anchor cable is made of rope. But the greatest advantage of the chain forerunner is that the mooring is not frayed on rocks and stones on the sea bottom after the ship has lain at anchor for some days in a current way. This chain forerunner must have been an uncommonly effective safety device when the ship was anchored,

one example among many to show how practical and ingenious the seafarers of those days were with their gear.

Strangely enough, this chain forerunner arrangement does not seem to have been known in the shipping of the later Middle Age; indeed, only after the year 1800 does it seem to have been reinvented at a time when the only known means of preventing the wear and tear of the anchor rope on

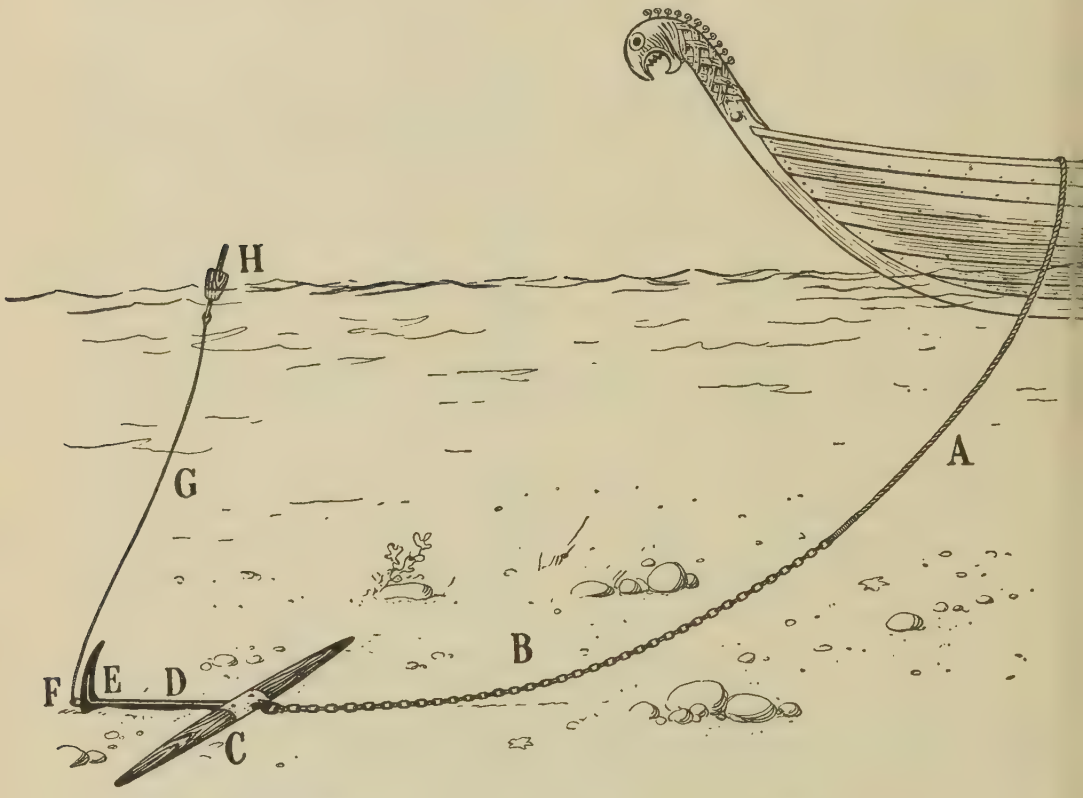

Fig. 5. Drawing showing how the Ladby ship anchor was used. The anchor is shown with chain forerunner, anchor rope, buoy and buoy-rope and the large wooden anchor stock from the Gokstad ship. Reconstruction. A, Anchor rope; B, anchor chain forerunner; C, anchor stock of oak; D, anchor shank (iron); E, anchor arm and fluke (iron); F, buoy ring; G, buoy rope; H, anchor buoy.

the bottom of the sea was to 'worm' it, which means to wind old rope round it nearest the anchor. How widely anchor chains were in use in Viking ages it is impossible to say, as they are never mentioned in the literature of those days. But there is mention of them already in Caesar's *Gallic War* (58–51 B.C.), for the Veneti, who lived on the coasts of France, had anchor chains.

The assumption, therefore, is that the anchor chain of the Ladby ship was no isolated case.

Like that of the Oseberg ship, the Ladby anchor has a ring ('hnakkmidi') at the crown ('hnakki') for a buoy rope ('hnakki-band'), to which the anchor buoy was fastened, an arrangement that serves two purposes, both of them equally functionalistic. In the first place, the buoy is a warning to other ships of where the anchor is lying, and a guide to enable the crew to find it again if the anchor rope should break; in the second place, the buoy rope was used for raising the anchor fluke ('fleinn') out of the bottom, which is much easier than breaking the anchor loose by pulling at the anchor rope, a method that has been universal right up to modern times.

In Fig. 5 I have endeavoured to show how the Ladby ship would be moored with anchor, chain forerunner, anchor rope, buoy and buoy rope. Looking now at the Ladby anchor and anchor-gear lying before us in the bow of the ship, they undoubtedly represent something of the best that could be produced at that time, not only in workmanship but also and to a much higher degree in the art of seamanship. If then we read the details of the analyses of the materials and the method of production, it is surely justifiable to assume that the anchor chain, and probably the anchor too, were made in Denmark by Danish craftsmen.

MANNING THE ROYAL NAVY: THE REFORM OF THE RECRUITING SYSTEM, 1852–1862

By R. Taylor

First Part

I

CONVERSATION rarely turns to naval history without someone raising the question of the navy's parentage, and the claims of Alfred, Henry VIII and the others are variously debated. But intellectual curiosity does not often extend below decks to the men who manned the ships. Few people realize that as a standing force of seamen supported by a system of voluntary reserves for war the navy is no more than about a century old.

The first half of the nineteenth century saw the distinction between Britain's two sea services become more marked. No press-gang went out after 1815, and as mercantile volunteers were few in this long period of peace the navy came to value more highly its own trained men and to raise more of them from boyhood—sound policy in view of advances in gunnery science—and for its war reserves, to take the place of 'pressed men', began to create reserves in coastguard and dockyard from its own seamen, who, unlike the merchant sailor, were already gunnery-trained and thus prepared for that more sudden onset of war expected in this age of steam propulsion. Moreover, in view of the final abrogation of the protectionist navigation system in 1849, the navy's traditional nursery of seamen was held by many to be no longer reliable, and naval authority almost ignored it until 1860, when, however, it was found to be indispensable, and the Royal Naval Reserve was formed. Above all, it was in this mid-century period that the navy became a permanent, specialized, fighting force of the Crown in its seamen as it had been for some two centuries in its ships.

The old way of manning in time of peace, that so gradually fell into disrepute during the first half of the nineteenth century, was a casual, yet time-honoured affair. When a ship was brought into commission, the newly appointed captain and officers had to find their crew. The complement of boys, it is true, came from the flagship, and marines were marched on board from barracks; but the vital part of the crew, the seamen, had to be recruited. Handbills were distributed and placards displayed in the seaport, giving

the name of the ship, her captain and often her destination. Volunteers began to trickle into the local rendezvous, and some might be sent down from the rendezvous at Liverpool and Bristol, or the Tower of London where the *Crocodile* received entries from many parts of the country. Eventually the ship sailed—quite unequal in her early days to the duties of a man-of-war. But discipline and exercises gradually turned men into a ship's crew, and after some twelve to eighteen months at sea the captain could rank his ship efficient. Punishment, often frequent and severe in the first year, decreased; for some eighteen months the lower deck could be justifiably proud of their ship as an effective fighting unit. By this time, however, the ship had been out about three years and the end of her commission was in sight. After some six months of slackening discipline and falling morale, 'pay-off' arrived. Marines returned to barracks and boys to the flagship, but the seamen were discharged with no further obligation to the service.

Though the seamen liked the system, there is no doubt that it justified Nelson's epithet 'infernal'. As there was no standing body of seamen from which crews could be drawn, the ships awaited the men, often for as long as three to four months, particularly if seamen were short, or captain, ship, or destination unpopular. And when at last recruited, the crew had hardly been welded into a battle unit before they were casually disrupted. (After 1835 seamen were nominally enlisted for five years, but the law remained almost a dead letter.[1]) Wastage, like delay, was an ineradicable fault of a fortuitous method. Between 1840 and 1852 some 1150 men (excluding deserters) annually quitted the navy after short periods of service; in 1848 alone over 6000 were discharged, many of whom left the country. Few, indeed, were the men who accumulated twenty-one years service without a gap of more than five years, and so earned a pension.

The defects of this old 'hire and discharge' system were thrown into sharp relief by several developments of the nineteenth century. The press-gang, for example, fell into disuse after Waterloo. In the past even liberal writers like Junius—indeed, even seamen themselves—had acknowledged the necessity of impressment, and as recently as 1803 Cobbett had castigated Newcastle shipowners for complaining. But within a generation or so the political and moral state of society had changed so radically that statesmen in the 1840's feared the consequences of a resort to it. Few people thought magistrates would back press warrants, and if they did public opinion was expected to support the seaman in his resistance to the brutalities of the gang. Many would undoubtedly flee the country to join British seamen

1 By 1852 seamen-gunners were being required to enlist for five years.

already in the American services, who would scarcely return home to be pressed.

For another reason, too, there were doubts about the reliability of the ancient nursery of seamen. The great increase in British tonnage since the middle of the seventeenth century was popularly attributed to the complex system of protection provided for British mercantile shipping by the navigation laws, which *inter alia* required at least three-quarters of the crew of any British ship to be British seamen, and the crews of ships in the coasting trade round Britain all to be British. Sea power, on which the defence of these islands rested, depended—so the protectionist doctrine ran—on a national mercantile marine, British-built, British-owned, and British-manned. But early in the nineteenth century protection began to collapse before the theory of *laissez-faire*, which in the economic sphere pointed to a free-trade system; and the navigation laws, the last great outpost of protection, were repealed in 1849.

At least as important as social and economic factors in compelling the reform of naval manning was the impact of the scientific revolution on the navy, one of the earliest aspects of which was the rapid advance in the science of gunnery. Although experiments with explosive projectiles had been made in the eighteenth century, the really significant event was the publication by the Frenchman, General Paixhans, of his proposals to humble British naval pretensions with a new French navy equipped with paddle-steamships and armed only with shell-guns. Though the adoption of Paixhans's ideas was delayed by French public opinion until 1837 on the grounds that shell-guns were inhuman, it was only two years later that Britain reluctantly ordered part of her ordinary gun complements to be made shell-firing. The revolution in naval armament—towards the achievement of greater accuracy, range and destruction—was firmly on its course in the 1840's, through explosive round shells fired from the old smooth-bore gun on to—in the middle and later fifties—the rifled gun imparting rotation to a cylindrical shell. Between 1815 and 1852, it was said, advances in naval gunnery rivalled the progress from blunderbuss to rifle.

As early as 1830 gunnery specialization in the navy had begun in earnest with the establishment of the *Excellent* at Portsmouth, and by 1852, although regrettably few naval officers took much interest, those who were abreast of the times attached great importance to its training courses. One of them, Rear-Admiral Sir Maurice Berkeley, was convinced that two-thirds of a ship's crew would now have to be gunners, using their weapons with the thorough knowledge which could alone be acquired by the man-of-war's man; the untrained merchant sailor, in his opinion, was useless in view of rising standards. As skill and precision rose, so did the

value of the trained man, whom it became, therefore, increasingly uneconomic to throw to the four winds at the end of even five years.

A second aspect of the scientific revolution was the advent of steam propulsion, which produced an immediate and startling effect on tactical planning, for decisions would now rest more with man and less with the elements, and attack might be a matter of hours from the outbreak of war. Rapidity of action, always an important factor, was becoming increasingly so; and rapidity of action depended upon the complete readiness of the peace navy, and some, at least, of its 'reserve' forces. (Though steam thus made swift mobilization imperative, its effect on the constitution of crews was small until it supplanted sail and became the sole motive power, since skilled seamen were still as essential as they had always been. Stokers were easy both to recruit and train.)

Nor was mobilization so remote a contingency in the 1840's. The growth of steam propulsion was tempting a liverish France, who had digested neither Trafalgar nor Waterloo, to revive her sea-power by creating a steam navy, for in building steamships both France and Britain would start from scratch. The Syrian crisis of 1840 found Britain able neither to bring her ships' complements in the Mediterranean up to full strength nor to send out extra ships for some months, a period during which French naval officers, who knew of our weakness, eagerly awaited the order to attack, while at least two British captains gloomily contemplated the possibility of British withdrawal from the Mediterranean altogether. Moreover, it seems likely that the Channel could have fallen to French control at this time, whilst British ships lay four or five months at Spithead awaiting men.

Within four years there blew up the Tahiti dispute with France, and again Britain was caught napping. She had no fleet in the Channel, and seamen were not to be had for the few ships otherwise ready, whereas France, it was known, had a squadron of large steamers at Cherbourg—only sixty miles away and undergoing rapid expansion—ready for immediate service.

The belief that steam laid Britain open to invasion was strongly held in high places. Wellington regarded her as assailable whatever the state of tide, wind, or weather; and Palmerston saw the Channel as now no more than a river 'passable by a steam bridge', across which 20,000 to 30,000 men could be thrown in a single night. Though naval officers were much less panicky about invasion—one of them likened a steamer in a rolling sea to a cat in walnut shells on ice—there was obviously a case for action. In building up steamship strength much was done in the forties, but in manning very little beyond the discovery that, look where we might, we were very ill-prepared.

There was no lack of schemes to take the place of impressment. Lieutenant J. H. Brown, the registrar-general of seamen, had submitted to Peel's government a plan for forming a voluntary reserve, consisting at first of ex-naval and later of merchant sailors as well, in the merchant service, but Peel seemed to favour the establishment of a coast militia drawn from fishermen and coastal 'aquatics'. But nothing had been done when in 1846 he was displaced by Russell, whose government pinned its faith in ex-naval seamen, of whom there were in existence two small bodies in the coastguard and dockyard service. Lord Auckland, the new First Lord, ordered them to be given gunnery instruction to refresh their knowledge and fit them for manning the guns of any ships in the navy; and training on a common pattern began as soon as guns were fitted within reach of coastguard stations. Great enthusiasm was shown, and there is no doubt that the younger members of the force, especially, were highly efficient; but in 1852 less than 2000 of them had signed the contract, instituted in 1845, to serve in war.

By contrast, French resources in trained men were far greater than Britain's. Not only did her system of maritime conscription pass most of her seafaring men between eighteen years of age and fifty through the navy, but their gunnery training appeared most thorough: there were establishments in the principal naval ports, and two gunnery frigates for training afloat. Though British opinions varied about the effectiveness of this apparently first-class system of manning, a French parliamentary commission of enquiry in 1851 made a remarkably frank and confident report on both *matériel* and personnel, and discussed their chances against the only possible enemy, England.

Demands for the reform of British manning, towards which—as I have tried to show—social, economic, scientific, and political factors each contributed much, came to a head in 1852. The mainsprings of action were the report in 1853 of a committee of naval officers (which I designate the 'manning' committee) appointed by the Admiralty of Derby's first administration to consider the manning of the navy, and the report in 1859 of the Royal Commission on Manning, appointed by Derby's second administration. The two high peaks of reform prompted by these reports tower above changes devised by the Admiralty itself, except in the realm of naval discipline, where the Admiralty was the prime mover. Between 1852 and 1862 Victorian Britain, besides writing the epitaph of the old press-gang, created a standing navy of seamen in peace and formed gunnery-trained reserves for war.

II

When the 'manning' committee reported in 1853 Aberdeen's government was in office and Sir James Graham was First Lord of the Admiralty. To Graham—and to some extent to Rear-Admiral Berkeley, who was second sea lord and as usual had manning under his wing[1]—must be given the credit for putting into effect most of the committee's recommendations.[2]

The gradual organization of a standing navy, the committee held, must rest upon the entry of boys, who, it was now well understood in the service, matured into the best and most loyal seamen. For some twenty years past there had been a separate vote of 2000 boys annually, but of those who entered only about one-quarter received any special schooling, such as that in the *Impregnable* at Devonport, where besides pursuing a general education the boys were trained in seamanship and gunnery. Although the committee failed to carry their point on the need to extend these courses, in other respects their advice on boys' service was accepted. After 1 July 1853 all boy entrants had to engage for ten years 'continuous and general service' to count from the age of eighteen; boys serving on the old seven-year term were allowed to transfer; standards of entry were tightened; and prospects of promotion from boy to seaman became more assured.

Until 'continuous-service' boys grew up, however, the success of the reform turned on persuading adult recruits to prefer entry for continuous service, and serving seamen, who would be able to count time already served, to transfer to it. The sharpest spur was higher wages. An A.B. on the new terms, for example, was to receive £2. 9*s*. 1*d*. a month as against the old rate of £2. 1*s*. 4*d*., and when the other advantages of the navy (gratuities, pensions, and the like) are borne in mind, the new rate compared quite favourably with the pay of an A.B. in the merchant navy at this time. Besides the appeal to their pockets, seamen accepting the new system had their total period of service reduced from twenty-one years from the age of 20 to twenty years from the age of 18; paid leave was to be given between commissions; sick-pay conditions were improved; and—a most important concession—the Admiralty promised that where possible men would be allowed to change ships, thus recognizing the seaman's attachment to the old method that gave him choice of ship and at least his first station.

1 Berkeley's is a consistent influence through the changing governments of this period: he was in charge of manning almost continuously from 1846 to 1858, and he strongly favoured reform.

2 To a very great extent the architect of the new system was the committee's secretary, C. H. Pennell, an Admiralty clerk. The recommendations follow closely—at times are identical with—pamphlets of his, which were later shown to both Queen and parliament. He was knighted for his work in 1867.

If this new navy were to attract the best and persuade them to make it their career, a carefully graded ladder of promotion was essential, and to this end were directed important reforms based on the committee's proposals. The highly proficient A.B. was to be recognized in a new class called 'leading seaman', with 2*d.* a day more than an A.B., and exempt from the lash except by court-martial sentence or for mutiny. In the gunnery field, too, proficiency became the qualification for extra pay. The value of the *Excellent*'s work, the committee found, could not be overrated, but its complement had only once been complete, many seamen-gunners failed to return after their first five years, and desertions had increased since 1840. Greater incentives were needful. Two classes of seaman-gunner were therefore established: the first (to get 2*d.* a day extra) was to consist of those petty officers and seamen likely to qualify for the positions of gunners (warrant officers) and gunners' mates; and the second (with 1*d.* a day extra) seamen passed as captains of guns. In choosing its candidates the *Excellent* intended to give preference to the continuous-service man.

In recent years petty officers had been difficult to find, so the advantages of the rating were extended by the creation of a new class at the top, the 'chief petty officer', whose pay (in certain ratings) would be 3*d.* a day higher than the petty officer's. In addition, promotions to petty officer were as far as possible to be made from continuous-service leading seamen, long-service medal gratuities were raised, more petty officers were to be eligible for gratuities when a ship 'paid off', and under certain conditions their pensions were to be increased.

Far harder to fill were the warrant posts, so essential to the efficiency of the fleet. For some time the warrant officer's status had been declining, until by 1852 promotion to W.O. was regarded with indifference, or even rejected. His sorest grievance was the stoppage since 1830 of a pension to his widow, owing to alleged abuses by young widows who displayed too little self-respect; but the Admiralty, instead of restoring the pension as the committee proposed, increased the man's pay by between a quarter and two-fifths, promised commissioned rank to those distinguishing themselves by acts of gallantry, and also made minor concessions.

Besides trying to whet the ambition of its seamen to rise in a more permanent organization, the navy was bringing its discipline into conformity with the standards of a more humanitarian age. Soon after the Napoleonic War, with a view to 'regulating' the despotic rule of the captain, the punishment warrant was introduced, and the records he was ordered to keep had to be forwarded periodically to the Admiralty; and by 1853 parliament was regularly receiving returns of corporal punishment. Although drunkenness was still the greatest single enemy of good behaviour, the

seaman's character was improving, and in 1847, by the request of ships' companies, tea and sugar could be taken instead of the spirit ration. In 1850 the spirit issue was cut by half, increases in food made, and the evening issue of grog stopped altogether. The first night of the new régime was the quietest Mr Carr had ever known in the *Wellesley* 72! The year before this, as a positive stimulus to good discipline, the Admiralty had introduced the good-conduct badge, which carried 1*d.* a day for five years' good conduct, 2*d.* for ten, and 3*d.* for fifteen. Except for mutiny or desertion the possession of a badge protected its owner from the lash.

The 'manning' committee said little about discipline, as an experimental reform of minor punishment was being tried while they were sitting. This placed a further restraint on the captain's absolute power by introducing in 1853 a 'more uniform' system of punishment, whose general tenor was one of masterly common sense. In the handling of men, captains and officers were reminded, firm but conciliatory language was more effective than abusive and degrading epithets, investigation of offences should never be hasty, and the punishment must fit the crime. To secure greater uniformity from ship to ship a detailed code was laid down. If the crime were serious enough to need a gaol sentence, it must be proportionate to the offence; and in the use of corporal punishment the utmost care was to be observed. By encouraging the co-operative, however, and handling offenders wisely, officers, it was hoped, would be able to maintain a higher standard of discipline.

Taken broadly, these reforms of 1853 in the constitution of the peace navy were an achievement of cardinal importance, especially in dissociating a man's length of service from that of the ship in which he served. With longer service now possible fewer seamen, the Admiralty hoped, would be lost to the navy just when their training and experience, especially in the vital arm of gunnery, made them most valuable. From 1853 onwards the navy's seamen were thus gradually becoming a standing force of the Crown, instead of a hotch-potch of experienced and raw who had been collected for the occasion of a ship's commission and dispersed through the alleys of the dockyard ports at the end of it. This is both the first attempt to place the navy (in its manpower) on a permanent footing and the foundation of the system as it exists to-day.

III

On war manning the proposals of the committee, if less far-reaching, led to some significant decisions. From playing the leading role for centuries as the nursery of the fighting service the merchant navy was now thrust

out of the cast altogether. Not only was its buoyancy in a competitive world still too brief to be a safe guide to its future, but the impending repeal of the 'manning clauses' (retained until 1853) was regarded by most naval officers as a death blow to the ancient nursery, since the expected influx of foreign seamen would scarcely be good material for the navy at war. Besides, the committee found no way of recruiting merchant seamen except by some form of compulsion, which they were both reluctant to advise and unwilling to rely on, whether it were the old impressment or some less random alternative such as selection by ballot.

Instead, this committee of naval officers turned to their own trained men in coastguard and dockyard. A minute investigation of the coastguard satisfied them that both its constitution and training were soundly organized. Of the total force of just over 5000, rather more than 2000 were ex-naval men, another 1900 had had sea experience, and 2756 (of whom 1491 were from the navy) had received gunnery training. Although there were still some old civilian members awaiting superannuation, the force in its present form attracted the cream of the navy, and by its entry regulations rejected the dregs. In 1853, ten years' naval service from the age of 18 instead of seven in a man's rating were required, and thoroughly good conduct was still a *sine qua non*.

But there were marked defects. Between 40 and 45 years of age the ordinary sailor was too old for active service at sea, and after 35 perhaps of little use aloft; and only some 2000 men were under 35. Many, too, would have lost their sea-legs. Worse still, a civil contract was a quite inadequate guarantee of service in war; and on only 1527 of the 5000 had the Admiralty even this slight vestige of a claim. This, however, was remediable, and in 1853 all men of the coastguard and revenue cruisers (and all ex-naval men in public departments) were made liable by statute law to naval service in emergency. But even so, including some 350 dockyard riggers, the country could count on no more than about 2500 effective reservists.[1]

To supplement ex-naval men in reserve the committee proposed the formation of a reserve (initially of 5000 petty officers and A.B.'s) from seamen leaving the navy after ten or fifteen years' service. Men leaving after ten years were to be paid a 'short-service pension' of 6*d*. a day, and those leaving after fifteen 8*d*. a day, provided they undertook to serve until they had 20 or 21 years combined service, or reached the age of 48. In

1 The committee's scheme to have 10,000 naval seamen 'in reserve' in the home ports—who, besides helping peace manning, would have taken the first strain of a war expansion—was not acted upon, probably because of expense; nor apparently was their suggestion that ex-naval men should be appointed to some 2000 Crown posts.

order, however, to give continuous service a chance to find its feet, this reserve was not begun until 1856.

Outside Royal and merchant navies there was one possible source of sea-faring men—the fishermen, part-time fishermen, and the men of the small boats in general. The scheme for a coast militia put to Peel's government was now followed up in a thorough enquiry by coastguard officers. Though little enthusiasm—in some districts even bitter contempt—for naval service was revealed, the committee thought it worth while to try to form a reserve of 10,000 men from these hardy, stubborn, and clannish folk, and Graham agreed. To be called 'The Royal Naval Coast Volunteers', the new force would be trained by the coastguard for twenty-eight days a year, and be available in emergency for one year's service within 300 miles of United Kingdom shores.

For war manning—without coercion—the committee's proposals were somewhat unrealistic. To raise the navy to a war strength, all told, of 100,000 (it was 140,000 forty years before) some 60,000 above peace establishments would be needed. Not all, of course, would have to be seamen. Just as only about two-thirds of the 40,000 in the peace navy came into this category, and of them only two- to three-fifths were A.B.'s, so for the war increase of 60,000 only some 40,000 seamen would be required, 16,000 of whom at least would have to consist of the highly skilled and quite indispensable A.B. Naturally the 40,000 seamen would not all be wanted overnight, but whence could have come even a fair proportion of the 16,000 A.B.'s when the principal reserve stood at around 3000? New crews could not fight, might never even get to sea, without a kernel of these men. Nobody could forecast how the short-service reserve would turn out. And beyond these ex-naval men there would be nothing but fishermen. As for the rest of the 40,000, what time would there be in a 'steam' war for training mercantile recruits (if they volunteered) in gunnery, or raw landsmen in seamanship as well?

If voluntary methods failed, the committee saw, the only course was the maintenance of a much larger peace navy—or compulsion. To guard against the failure of the voluntary principle, the statutory power to compel (the ancient common-law right had been put into statutory form in 1835) was carefully retained and the provisions for its execution improved in a new act. But for war, as in peace, this was an age that set great store by the volunteer. Nevertheless, if after 1853 the peace navy was, broadly, on a sound footing, war reserves were certainly not.

IV

Before many of the reforms just reviewed could get under way the Russian War had broken out. Although the fleet in being in the Mediterranean was available for service in the Black Sea, that required for the Baltic had to be assembled from the reserve, and manned with new crews. In a maritime sense this war was little more than—as one naval officer later put it—'a yachting cruise up and down the Baltic' and 'a little fighting in the Sea of Azoff'; but it was enough to lay bare the bankruptcy of British methods of war manning.

Superficially the policy of the Aberdeen government appeared successful. Though no bounty was offered, it did seem that the attraction of continuous-service terms was drawing good recruits. In the spring of 1854 *The Times* wrote eulogies on both fleet and men assembling at Spithead, and both Graham and Berkeley claimed in parliament to be satisfied. Yet, despite government denials, the quality of most volunteers was deplorable: the merchant service was getting any trained men there were, and the navy, it was asserted, except for its reservists, was recruiting landsmen. Free trade, it was becoming apparent, had given a fillip to British commerce, which the threat of war had further stimulated, and mercantile wages were high. How many merchant seamen did, in fact, join the navy is uncertain, because the Admiralty figures and those given by the registrar-general of seamen violently disagree; but every other shred of evidence there is suggests that the registrar was right, and that only the merest handful of good merchant sailors came into the navy. Not only was the Baltic fleet dangerously short of A.B.'s (and of leading seamen as well as petty officers), but the war additions to the Black Sea fleet were often of the poorest quality.

The backbone of the Baltic crews consisted of coastguardsmen and seamen riggers. Though bald heads might appear as caps came off and spectacles were adjusted for divine service on the *Nile*'s first Sunday at sea, without these fine seamen she might well never have got to sea at all. From ships coming home or specially recalled, crews were broken up and drafted into the Baltic fleet. Even so, they were hard put to it to counterbalance the cabmen, navvies, butcher boys, and riff-raff who piled into the navy. Some of the ships that had begun 'manning' in 1853—the *Amphion*, for example—were, it is true, reasonably well off, but one line-of battle ship recruiting late in the day sailed with only eight A.B.'s out of her 850 crew. As W. S. Lindsay, a shipowner and later a member of the Royal Commission, remarked: 'The Lord have mercy on the British fleet should we again have the world in arms against us.' And only half the fleet originally intended

was able to sail in March 1854. It was two months before the French contingent arrived, but fortunately for us the Russians, with no steamships at all, were disinclined to come to blows.

Within a week of the outbreak of war, Berkeley wrote privately to Admiral Sir Charles Napier, commanding in the Baltic, that he was 'at a dead standstill' for seamen, and before long both he and the First Lord were urging Napier to recruit Scandinavian seamen if he could get them. To such a pass had things come in so small a war. Looking back on it in June 1856, Berkeley himself admitted in parliament: 'We had got to the length of our tether, and what we should have done if we had had a maritime war he really did not know.'[1]

1 Hansard 3rd S. CXLII p. 1445.

(To be continued)

AN UNSAFE TREATY

HOW A SUCCESSFUL WAR WAS FOLLOWED BY AN INJURIOUS PEACE, 1601–1618

Commentary by Patrick Brian MacCarthy

IN August 1957 in *The Mariner's Mirror* the present reviewer summarized by request Volume XI of this stately History in which the events from the spring of 1598/99 to the spring of 1600/1 required over 600 large quarto pages to disentangle truth from error. Volume XII, now under consideration, ranges 'From the Parliament of 1601 and the siege and battle of Kinsale to the death of Queen Elizabeth. With an Epilogue on the coming of King James VI of Scots to the throne of Great Britain; the fall of Sir Walter Raleigh; the Peace Treaty with Spain, and consequent events in the declining times.'[1]

Though in 1601 there was no great fleet action, the Queen's Navy played a large part in preventing the Spanish conquest of Ireland. But the rapidity with which sea-power can be lost is shown in the next reign with a co-ordination of English and foreign evidence, much of it new to us all.

'*I hold an enemy may be trusted if he offer safe conditions, as a physician may if he gives a wholesome and tried medicine. . . . It is no cure to bring a State from a doubtful war to an unsafe treaty. It is no more than to put a feverous body out of a hot fit into a cold.*

'*To conclude: as an unskilful physician may by weakening a natural body with his medicines bring it from a tertian or a quartan fever into a hectic, so an improvident statesman may with conditions or treaties disarm a State.*'

Thus spoke Robert, Earl of Essex, K.G., P.C., Master General of the Ordnance, in 1598, in answer to Lord Buckhurst who was urging consent to a Spanish Treaty. Buckhurst was ultimately to accept (in a manner astounding in a personage of his rank and wealth) one of the secret annuities by which the Conde de Villamediana brought about a purchased peace in circumstances 'more injurious to England than a war'.

1 *Elizabethan England: Being the History of this Country 'In Relation to all Foreign Princes'. From original manuscripts, many hitherto unpublished, co-ordinated with XVIth century printed matter ranging from royal Proclamations to broadside ballads. A Survey of Life and Literature. By E. M. Tenison, Officer of the Order of St John of Jerusalem. Corresponding Member of the Royal Academy of History of Spain, and Member of the Society for Nautical Research. . . .* Volume XII. Leamington, 1958. pp. xxxiv + 602. [Twenty-four Collotype plates and other illustrations.]

Those of us who in 1924 studied Professor Callender's *The Naval Side of British History* can hardly have forgotten the drastic terms in which he denounced the 'Peace' of 1604. He is more than justified by Spanish materials not then accessible but now made available to any who have the patience to follow the diplomatic twists and turns, and to contrast the veniality of a small group of courtiers with the robust patriotism of 'the Common Sorte', whose lamentations for the loss of Essex are here revived, in several instances from the only known examples.

The extraordinary prestige of Queen Elizabeth, and her complacency and composure up to the last, are graphically shown through her own words; not least in her famous speech to her final Parliament. But it was not what was being said in the Upper and Nether House in England, but what was happening in Ireland upon which the main issues turned. The last Spanish invasion of Ireland is depicted, as it appeared at the time, to the Irish, the Spaniards, and the English, in such sort that we can see the case for them all. Some years ago a civilian writer declared it impossible to understand the battle of Kinsale. But with the aid of two unpublished sketch-maps made on the spot (one by Paul Ivye, a protégé of Raleigh, and the other by Boazio, who had been cartographer to Drake and Essex) even an intelligent boy of 10 could follow the main course of events in 1601.

Surprising as it may seem, the Lord Deputy, Charles Lord Mountjoy, K.G., on the eve of invasion wrote to the Lord President of Munster, Sir George Carew, that he did not expect the Spaniards 'this year [1601], if at all'. Carew was much more alert to the danger, and Mountjoy afterwards bore him no malice for having been the wiser of the two. The friendly relations between these high officials was a considerable factor in the ultimate success of the English Army. The *English* Army it certainly was, though Standish O'Grady in 1896 claimed that it had been merely a victory of Irish royalists over Irish rebels, and that no credit was deserved by Englishmen. Actually Mountjoy had under his command many of Essex's former officers, several of Cadiz renown: and the Queen on being informed of the Spanish menace had sent troops from England, carefully chosen from the Trained Bands. There need be no further controversy in this connexion. As in previous volumes of this History, all particulars about the Army are direct from the sources; and ample justice is done also to the adversary.

As so often in Ireland, jealousy and treachery played a tragic part, and the intentions of Tyrone, 'the Great O'Neill', were betrayed to the English by an Irish Chief who owed his restoration to chieftainship entirely to Tyrone, and resented the obligation.

Tyrone wisely had determined to subject the English forces to a long

process of attrition, and then fall upon them by surprise; with Don Juan del Aguila in Kinsale ready to strike at the same juncture. But against his better judgement Tyrone was persuaded by O'Donnell (Tyrconnel) and by Aguila to forego the intended attrition and strike swiftly. This might have succeeded, had it not been for Brian Oge MacMahon sending word into the Viceroy's camp when exactly to expect the onset.

The Irish, Spanish and English narratives are duly contrasted, but though so different in standpoint and emotions they accord as to the main facts. A remarkable element in the drama is the superlative bluff of Don Juan del Aguila in Kinsale, and the characteristic Spanish subtlety with which he, the vanquished, dictated terms to the victor. We may remember the fury of Queen Elizabeth when Essex accepted Tyrone's offer of a truce. But she had no reproaches for Mountjoy who accepted and signed the adversary's terms without even waiting to consult Her Majesty. Victor and vanquished dined together in the Viceroy's Camp and exchanged compliments in the fashion of the old *buena guerra*.

Though the popular balladists in London jubilated that

> Don Iohn de Aquila and all his traine
> With little honour are returned to Spaine,

the Spaniards had won the 'Parley' when almost in extremity; and we may well be amazed at the terms of the Articles of Agreement, which are given in full.

However, Mountjoy and Carew did not sit down and rest; nor did Sir Richard Leveson (a Cadiz Knight) commanding the Queen's Navy. It seemed to them most unlikely that King Philip would passively accept defeat. By keeping the Royal ships near the Spanish coast, and manifestly making ready to meet and frustrate any second invasion, they secured the fruits of victory: so the end of Queen Elizabeth's reign was tranquil, in spite of Father Parsons and Father Cresswell continuing to assure English refugees in Rome and Madrid that the Infanta Isabel was the rightful heir to the Crown of England and that the King of Scotland was riding for a fall.

That James the First came to the throne of Great Britain without having to fight for it has retrospectively given a mistaken impression that his succession was a foregone conclusion. We are shown the course of events as they occurred. The haste with which King James disarmed the English merchant navy, not after but before the Treaty of Peace, is brought out dramatically; though at the same time we are shown his paternal advice to his 'dearest son Henry the Prince', which if we did not know to the contrary would produce an impression of wisdom, caution and firmness.

That the Peace had been purchased was alleged in Madrid, to the indignation of the Ambassador, Sir Charles Cornwallis, who wrote home

that he had contradicted this shocking calumny. His most eloquent letters of protest were addressed to the two Privy Councillors whom the King of Spain had considered worth the highest prices. The figures, from Simancas, are not open to dispute. These secret pensions were to be continued a decade later by the Conde de Gondomar: four volumes of whose *Correspondencia Oficial* have been scrutinized and the essentials put for the first time into English. His letters to King Philip must bring home beyond dispute how right Professor Callender was in execrating the Treaty of 1604, of which the Tenison Volume XII gives full particulars, and brings together for the first time the English, Dutch and Spanish official renderings.

'In seafaring matters', wrote Gondomar from London, 'things are in a different state from what they were in the days of Queen Elizabeth, for then all ships were armed, so as to go out and rob, and now only the merchant ships sail, and the galleons of the Fleet are rotting in port, except three or four, which are kept in good trim to go out on some passages; in consequence of which *seamenship is declining, and everyone is forgetting the profession; this much fruit at least has been gathered from the Peace, for the same thing is happening to the forts and Castles and also to the soldiery of this Kingdom.*'

The tragedy of Sir Walter Raleigh is unfolded in what seems to be a final and conclusive fashion. The accusation at his first trial (1603) of having 'a Spanish heart' and being in the pay of Spain had been indignantly denied by him, but the editors of *State Trials*, and also the historian S. R. Gardiner, could not make up their minds how far he was guilty or otherwise. There is only one sure way of settling the question, and it seems strange that it has not till now been attempted, 340 years after Raleigh died on the scaffold, executed in 1618 on the former charge and condemnation. Only by scrutinizing the secret Spanish pension lists could there be any conclusive answer *pro* or *con*.

These lists have now been fully examined. Raleigh was hounded down by Gondomar, and sacrificed by James to placate the pride of Spain, but there is no sign of Raleigh ever accepting Spanish bribes.

He was exceedingly perplexed why his 'friends' deserted him. The reason is now plain. It was not he but some of his accusers who were in the pay of Spain. We are given in full his scaffold speech which has usually been paraphrased so as to tone down or even eliminate his expressions of regret for Essex. Seventeen years after Essex's death he thought it necessary to assure the crowd that it was not true that he had 'puffed out tobacco at my Lord of Essex when he suffered'. He declared that though he had been of a 'contrary faction' to Essex, those who put him against Essex had subsequently turned against himself. He protested that 'my Lord of Essex' had been 'a noble gentleman'. More than this he said to the Dean of

Westminster, who however was too discreet to put it on paper, except that Raleigh explained to him privately how 'my Lord of Essex was taken off by a trick'.

A feature of this volume, making it unlike any previous history, is that it shows by ballads and other direct evidence the prolonged devotion of the 'common sorte' to the memory of Essex as 'Champion of Truth' and of the Crown and nation. It also shows how Essex's conviction that the Spanish diplomatists talked of peace only to cover preparations for war was no 'crazy' prejudice but a prediction precisely fulfilled.

This volume culminates in the death of Raleigh. At the beginning of the Index volume there is to be an analysis of the débâcle of 1625, the blame of which should not be on the shoulders of Sir Edward Cecil, first Viscount Wimbledon, but on the Commissioners for the Peace, who had accepted terms only fit to offer to a conquered nation. Though the rapidity of the decline of English sea-power had been stated in general terms by Professor Callender in 1924, his book seems not yet to have crossed the Atlantic, because a recent American biographer of James VI and I praises him for the Peace in 1604 and so does one of our former Lords of the Admiralty: from which it can only be concluded that the terms are unknown to them.

Not least revealing in this Volume XII is the analysis of the relations of Henry IV of France with England and the other powers, and with his own subjects: including his effort to obtain sea-power in the Mediterranean. The tragedy of his assassination is swift and vivid, as also the previous downfall of the warrior Duc de Biron.

Although the present conditions of warfare are so entirely different from those experienced by our seventeenth-century predecessors, the human interest of their aims and objects is nevertheless compelling. The portraits and illustrations, holograph letters, and facsimile title pages, add to the sense of living in those times and seeing them as contemporaries; not across a gulf.

We are informed that the typescript read by Professor Callender was in 1952 burnt to ashes, with a half a lifetime's collection of materials, which had to be found all over again for Volumes XI and XII.

The present commentator remembers how Professor Callender baptized this History as 'the Inquisition of Truth'. Some of the truths divulged must be mortifying to English pride: and whereas four of the Commissioners for the Peace in the painting of the Conference are looking towards the artist, Mountjoy, Earl of Devonshire, gazes into space as if not very happy in the company in which he finds himself. That the Spaniards discriminated between him and the others is indicated on the pension list by a marginal note that 'if he will not take it in money it can be offered to him in jewels'.

Mercifully for himself he was not long to survive, and thus escaped realization that the so-called perpetual peace had sown the seeds of the next war; a war which was to be as humiliating for England as the Cadiz venture of 1596 had been glorious. So rapidly can dignity and discipline decline, for, as we are once again reminded, it is not the times that make the men but the men who make the times. We appreciate Drake more fully after seeing how ill his country fared without him. But as long as Queen Elizabeth lived, Her Majesty's Navy remained efficient. The irony was that the Union of the Crowns instead of bringing about a doubling of strength worked the contrary way; for across a table at Somerset House five English Commissioners surrendered to Spain the security which by combined efforts of the seamen, 'martiallists' and statesmen had been built up for Queen Elizabeth, with the proud hope that it would last victoriously into 'long Hereafter Ages'.

RECORD

THE WRECK OF H.M.S. *FOWEY*

Contributed by Commander W. E. May, R.N.

To-day, when disaster overtakes her, a ship's course can usually be traced from her log, chart or navigator's notebook and one can find out exactly what went wrong and the initial error which led to the mishap. In former times, however, it was seldom possible for an enquiry to do much more than guess at what had really happened and apportion blame accordingly. It is sometimes of interest to examine the old court martial reports on the loss of H.M. ships to see if with modern knowledge a more probable estimate can be reached.

In May 1748 Rear-Admiral Charles Knowles, Commander-in-Chief of the Jamaica Station, sent the *Fowey*, 44 guns, Captain Francis Drake, to form part of a detachment under Captain Charles Powlett of the *Bideford* cruising off the north-west coast of Cuba against the Spaniards. On 4 June the *Fowey* fell in with, and captured, a Spanish vessel, the *St. Juan Tadicos* of 20 guns and 108 men, carrying a cargo of cocoa and indigo and a treasure variously stated as 190,000 dollars and 50,000 pieces of eight. Two days later she met the *Bideford* and remained in company with her for eight days.

I have been unable to trace the movements of the *Fowey* during the next two weeks, but presumably she continued cruising and towards the end of the month, in accordance with previous orders, started for Virginia. She still had her prize in tow and also had four merchant vessels in convoy. At least one of these, a Rhode Island brig under the command of Captain Collins, had met the *Fowey* at sea by chance.

At 6.0 a.m. on 26 June land was sighted and identified as 'Keysall (Caysal) and at 10.0 it bore S.E. ½ E. distance 7 leagues. The wind was E. by N. and the ship made good a course of N. by E. and continued to steer between this point and north, sounding every half-an-hour. About 10.30 p.m. it fell calm and remained so for about two hours before the wind sprang up again from the S.E.

At 2.30 a.m. on the 27th they had just sounded and found no bottom at 45 fathoms when Captain Collins fired a gun and hailed that his brig had gone ashore. The *Fowey* cast off the tow and tried to tack but both she and the prize grounded.

The brig came off successfully at 6.0 a.m., but though anchors were laid out the *Fowey* and prize remained fast at high water. To provide a means of escape should the worst occur, Captain Drake sent his third lieutenant to seize the brig which, as she had no anchor left, remained standing off and on. During the wait for the next tide the *Jane*, snow, of New York, got within six miles and anchored with the only anchor that she possessed. The other two members of the convoy had also gone ashore and of their ultimate fate we know nothing.

Steps were taken to lighten the *Fowey* by starting water and by throwing five guns overboard. More anchors were laid out and with the assistance of fourteen men from the *Jane* and 80 Spanish prisoners, who worked with a will, the *Fowey* was hove off soon after 4.30 p.m. The prize had got off just before and had anchored, but her cable parted and she stranded once again.

The *Fowey*'s bottom was found to be badly damaged and water gained on the pumps. Her officers were unanimous in the opinion that she would not float to the nearest port, so her crew of about 200 men were ferried aboard the snow and brig, together with the prisoners. The guns were spiked and the ship allowed to drift on to the rocks, but this time she bumped over and floated again the other side. She was therefore scuttled and settled down in four fathoms.

Practically nothing was saved, not even apparently the Captain's and Master's log books for neither has survived, though the Master did keep a note of the courses steered from the morning of the 26th and was able to put it in as evidence at the subsequent court-martial.

The first news of the disaster was brought by Captain Collins whose brig reached Boston with some of the castaways on the 21 July, a report appearing next day in the *Boston Evening Post*. Those who had embarked in the *Jane* were less fortunate as she was captured by a Spanish privateer which carried them prisoners to Havana, together with such trophies as the *Fowey*'s bell and compass, Lieutenant Middleton's log and some small arms. The capture of a prize off Tortuga late in August brought this information to Rear-Admiral Knowles, who sent a flag of truce to treat for the release of the prisoners, but presumably this was effected by the cessation of hostilities which occurred soon after and they were sent home.

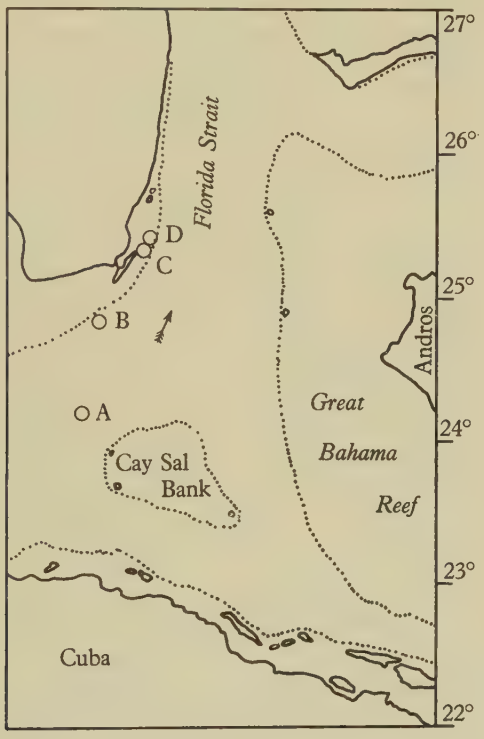

Fig. 1

On 5 December 1748 a court-martial assembled on board the *Anson* at Portsmouth, consisting of Rear-Admiral Charles Watson and Captains Hon. William Farmer, Jervis Henry Porter, James Gambier, Justinian Nutt, Molineux Shuldham and John Starr, to try Captain Drake for the loss of his ship. All the witnesses were unanimous in the opinion that the catastrophe was caused by an unexpected tidal stream which, they said, ran N.W. by N. and S.E. by E. at three knots, and the court found that this was the cause of the stranding of the ship and acquitted the Captain. Since he had no complaints against the behaviour of his crew, no one else was tried.

Fig. 1 is derived from Admiralty Chart No. 392. On it position A is that from which departure was taken at 10.0 a.m. on the 26 June, assuming that the land seen and described as 'Keysall' was in fact Elbow Cay, situated at the north-west corner of Cay Sal Bank. This is obviously more likely than the modern Cay Sal at the S.W. corner of the bank. Position B is then the position

which the ship would have reached at 2.30 a.m. on 27 June if she had made good the courses and distances given by the Master to the court, making no allowance for current or leeway but allowing half a point of easterly variation, which is about correct for this date (see the variation chart given in the *English Pilot*, Part IV, 1748).

Under these conditions the ship was steering direct for the reefs (the pecked line shows the approximate outer limit of danger) but actually she would have been affected by the Gulf Stream which sets in a N.N.E. direction at about two knots. If we allow a set of two knots N.N.E. from 10.0 a.m. on the 26th until 2.30 a.m. on the 27th the *Fowey* would have reached position C, not very far distant from position D where she actually struck. This is one point that should be determined with some accuracy for the latitude of the reef was observed as 25° 25′ N. at noon on the 27th while the ship was fast ashore. This is the latitude of Ajax Reef and not of Fowey Rocks which are 11½ miles to the northward.

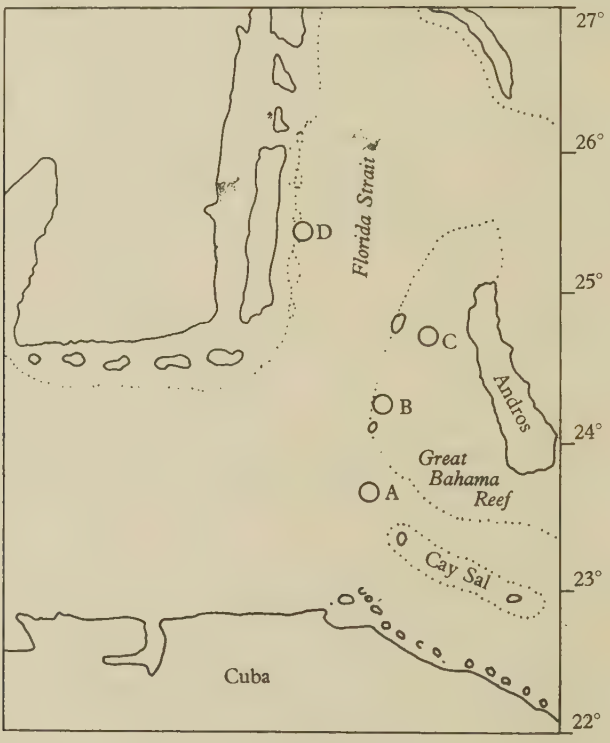

Fig. 2

There is no doubt that the reason why the *Fowey* went ashore was that she was steered direct for danger and not because she was set onto it by an unknown current. It is true that there *is* a tidal set on and off the reefs but if the ship had been at a proper distance off shore she would not have been affected by it.

The question now before us is what charts the Master of the *Fowey* had at his disposal. It is probable that he would have used the *English Pilot*, Part IV. This ran into many editions, but the National Maritime Museum does not possess any between 1689 and 1748. These have rather different charts in them so I have drawn Figs. 2 and 3 which are derived from the charts in these two editions. Different as these two charts are they agree in placing Cay Sal Bank very much to the eastward of its true position. If we lay off the various positions of the ship, using the same lettering

as before, we shall see that the ship might have been expected to run into difficulties on the Great Bahama Reef on the east side of the strait instead of on the west. Since no Master would have laid off such a course we can only assume that the Master of the *Fowey* had some local knowledge that Cay Sal was wrongly charted but did not know how much further it really was to the westward. He must have thought that he was sailing safely up the middle of the channel but, like a good seaman, he kept the lead going just in case. Unfortunately the reefs are too steep to for the lead to be much use.

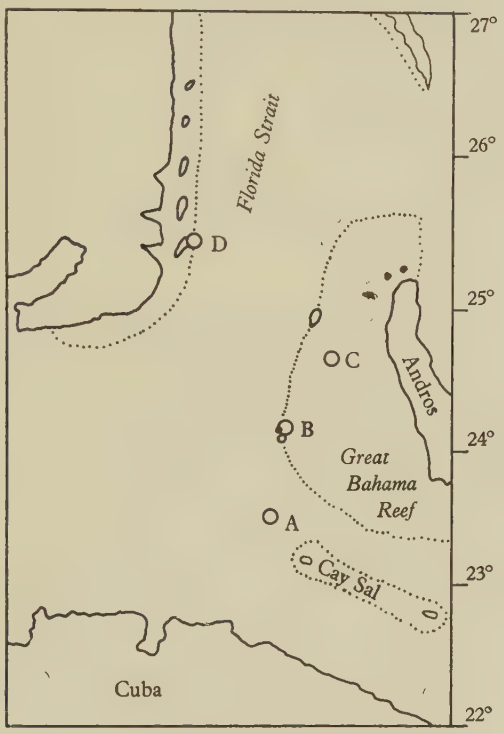

Fig. 3

So the court was wrong in attributing the disaster to an unknown current. It was the old story of the charting of two sides of a channel not fitting one another.

NOTES

RUSSIAN FLEETS IN THE CRIMEAN WAR

(See *M.M.*, Vol. 32, p. 83)

According to D. Lichatschew in the *Wajennüj Ssbornik*, 1902, pp. 2, 3, at the end of 1851 the Russian fleet consisted of thirteen ships of the line, seven frigates and six corvettes. The corvette *Adriane* was stationed together with the brigs *Orfeï* and *Perseï* in the Archipelago and these vessels were given to the Greek government when the war started, the Russian crews returning to Russia overland.

There were on top of that twenty brigs, schooners and tenders, four steam frigates and two training ships. (Information from the report at the Imperial review end of 1851.)

In Nikolajewsk were under construction the two ships of the line *Welikij Knjäs Konstantin* and *Imperatriza Maria* and in England the two screw ships of the line *Witjas* and *Wojn*. Many of the ships of the line were old and in need of repair, especially the *Tri Sspassitelja*, *Trech Jerarchow*, *Sselafail*, *Ssilistria* and *Sultan Machmud*.

After the launching of the *Welikij Knjäs Konstantin* and *Imperatriza Maria* one screw ship of the line of 131 guns and two of 120 guns were to be built in Nikolajewsk. The *Sultan Machmud* was to be dismantled, *Tri Sspassitelja* and *Trëch Jerarchow* to be converted into screw vessels, which necessitated enlarging and deepening the locks first.

The deterioration of the Russian relations with Turkey did not permit the full realization of these plans. Only the most urgent repairs were executed and several transports were altered for installing some guns.

When the Crimean War started, the *Sultan Machmud* and the *Trëch Jerarchow* were already dismantled.

The following warships were present at Sevastopol on the 22 September 1854 according to the orders of the adjutant-general, admiral Kornilow of 14 September 1854 (fleet disposition for 2 October 1854):[1]

(1) Fifteen ships of the line. (*a*) 120 guns each: *Tri Sspassitelja*, *Dwjenadzat Apostolow*, *Parish*, *Welikij Knjäs Konstantin*. (*b*) 84 guns each: *Warna*, *Sselafail*, *Jagudijl*, *Chrabrüj*, *Tschessma*, *Rostislaw*, *Urijl*, *Gawrijl*, *Sswjatosslaw*, *Imperatriza Maria*, *Ssilistria*.

(2) Seven frigates. (*a*) 60 guns each: *Midija*. (*b*) 52 guns each: *Kulewtschi*, *Kowarna*, *Ssisopol*. (*c*) 44 guns each: *Kajul*, *Flora*, *Messemwrija*.

(3) Four corvettes. 18 guns each: *Pilad*, *Andromacha*, *Kalipso*, *Orest*.

(4) Eight brigs: *Änej*, *Jason*, *Tesej*, *Ptolomej*, *Neakrj*, *Argonawt*, *Temistokl*, *Endimion*.

(5) Eleven steam frigates: *Wladimir*, 200 H.P.; *Chersones*, 260 H.P.; *Gromonossetz*, 260 H.P.; *Krim*, 270 H.P.; *Odessa*, 260 H.P.; *Bessarabija*, 260 H.P.; *Grosnüj*, 120 H.P.; *Dunaj*, 100 H.P.; *Elborus*, 160 H.P.; *Taman*, 180 H.P.; *Turok*, 100 H.P.

(6) Five schooners, five tenders and twenty-eight transport, blockships, guardships, etc.

Remarks hereto: *Urijl* and *Gawrijl* had left dock in May 1854, *Ssilistria* had no armament on board, though all the equipment pertaining to it. *Ssisopol* and *Messemwrija* cruised off the Caucasian coast until the end of March 1854. The brigs *Jason*, *Enej*, *Ptolomej* were armed on 29 May 1853. The steamboats *Kolchida* and *Jenikale* were on other stations of the coast. *Taman* left Sevastopol for Nikolajewsk on 21 September, transports *Ingul* and *Kinburn* were converted into fire-ships.

On 21 September Prince Mentschikoff ordered seven vessels to be sunk in the channel on a special signal of his. This was given on 22 September and the following vessels were thereupon sunk: *Tri Sswjatitelja*, *Urijl*, *Sselafaïl*, *Warna*, *Ssilistria*, *Flora* and *Ssisopol*.

W. A. MOLCH

[1] Other Sources: A. Gendre: Матеріалы Для исторіи обороны Севастополя. N. Dubrowin, Восточная война, 1853–1856, p. 121.

NAVAL HISTORY OF THE AMERICAN REVOLUTION

The U.S. Navy Department has announced plans to collect and publish the much scattered documents relating to the naval and maritime history of the American Revolution. Mr William Bell Clark will edit the work. The Navy Department states that a major contribution to the success of the project can be made by anyone possessing or knowing of unpublished letters, diaries, reports, ships' logs, and other Revolutionary War naval documents for the years 1775–85, and who will make such material or information available to the Director of Naval History, Navy Department, Washington 25, D.C. Material submitted will be on a loan and will, of course, be returned.

E. M. ELLER

GHOSTS ON THE SEA LINE

In the May number of the *Mariner's Mirror* there appeared a review written by me of the book *Ghosts on the Sea Line* by A. Hurst. In the book the author had mentioned that one of the hands was 'reeving off a new clewline on the mizen upper topgallantsail'. My comment was that he must have meant *lower* t'gan'sl, as the upper sail has no clewlines; it has downhauls. I believe that this is true in general practice. Mr Hurst has, however, sent me a photograph of one of the big German four-masters, the *Pamir*, under tow and about to make sail, with her upper topsails and upper topgallantsails furled but with the yards hoisted, and what would normally have been *downhauls* clearly shown as shackled to the clews of the sails, thus becoming in fact *clewlines*. The modification was apparently made to enable the sails to be set more rapidly by sheeting them home instead of hoisting the yards by the very slow halyard winches.

I am of the opinion that the practice was unusual, but perhaps some readers may be able to say if this were so or not; also whether the gear remained so rigged throughout the voyage or reverted to downhauls after the ship was under full sail. And were they called downhauls or clewlines? Of course, as long as the sheets were not started the clewlines would act as downhauls, as they do in the case of royals and single topgallantsails.

C. H. WILLIAMS

ERASMUS DARWIN

In the Hamilton and Greville Papers in the British Museum (Add. MS. 42071. f.52) I have found a remarkable instance of the understanding of maritime and other problems on the part of a man famous in quite another sphere.

Erasmus Darwin (1731–1802), physician, scientist, poet, and the grandfather of Charles Darwin, writing on 12 December 1778 from Lichfield to Charles Greville, said:

'I am sorry to see by the papers yt we are likely to have a violent French war—I hate war!—yet if we lose our Colonies we lose our power at sea, for as seamen cannot be *made* but must be *educated* (their business requires them to hang by their hands and other bodily exertions, which adult men cannot well acquire) I suppose the strength of any nation is exactly as the number of seamen they can employ in time of peace....

'What an Empire this would have been if Lord Chatham's idea had been followed! England to have supplied America with all manufactured commodities, and America to have supplied England with the raw products of the soil. The number of seamen thus employed in times of peace might at the time of war have been put into ships of war, and have conquer'd the world.

'But the Lord and King George thought otherwise!—perhaps it is for the better. Britain would have enslaved mankind, as ancient Rome, and been at length enslaved....'

OLIVER WARNER

SPAIN'S PROUD NAVAL TRADITIONS

Close to the Prado, one of the greatest of the world's art galleries, in the heart of Madrid is the imposing Admiralty building. Within the building, which can be easily recognized with its smart white-coated marine sentries, lies the Naval Museum. Here are priceless relics of Spain's glories as well as reminders that her fleet is still a modern and powerful one.

In the first gallery are some excellent water colours of ships of the navies of Rome, Athens and Venice as well as medieval ships belonging to various powers. Each drawing shows remarkably well the methods of construction and the particular points which distinguished certain types of ship. There is also a large model of a large war galley. But perhaps the most interesting relic of all is the sword of Cortes the great Conquistador who won for Spain much of her American empire. Cortes, though essentially a soldier, fully realized the importance of seapower when fighting the Mexicans. He himself said that 'the key of the whole war was in the ships' and he had small sailing craft built and manned by Indian allies for use against the Mexican king Montezuma.

Another relic in the same room is the sword of John of Austria which he used at the battle of Lepanto. He was in command of the combined fleets of Spain, the Pope and Venice when they utterly routed the Turkish fleet in this battle on 7 October 1571. He later became viceroy of the Netherlands under Philip II. Many letters written by John are among documents on view, and also his personal crucifix which he carried in his flagship at Lepanto.

In the second half of the room are drawings comparing seventeenth-century British and Spanish warships and also a signal code dated 1650.

In the second room there is an interesting picture showing the frigate *La Berenguela* passing through the Suez Canal in 1869. There is also a model of the Spanish frigate *Villa de Madrid* which was completed in 1862. An unusual series of drawings show drill movements, as practised in the Spanish navy, for bayonet, pike, sword, etc., in the nineteenth century. Three uniforms are shown including one of Admiral Mendez Nunez who was commander-in-chief of the Spanish Navy in the Pacific in 1866. He bombarded the Chilean rebels at Valparaiso on 31 March 1866, but his fleet was repulsed and he himself wounded during the attack on Callao in May the same year. There is a large painting of the latter action together with a piece of the hull of the steam frigate *Numania* showing a hole caused by a rebel shell.

Rather surprisingly in the same room are some sixteenth- and seventeenth-century cannon and portraits of Colon or Columbus as we know him and Vicente Pinzon, who discovered Brazil. There are also a number of examples of Indian art dating from the time of Columbus which have been donated by a Spanish naval officer. Of particular interest is a large model showing the *Santa Maria* at sea and a chart dated 1500.

Elsewhere in the museum there are many exhibits of tremendous value to students of British naval history. From the purely historical angle a model of Gibraltar at the end of the eighteenth century is worthy of note as is a picture showing the capture of the ship of the line H.M.S. *Stanhope* by a Spanish fourth rate in 1710. But undoubtedly one of the most important items is a case containing the hat, cane, sword and decorations of Admiral Gravina, the commander of the Spanish fleet at Trafalgar. The *Principe de Asturias*, his flagship, was heavily engaged by the *Revenge* and *Defiance*. The *San Ildefonso* closed to help the flagship and after a short while the *Thunderer*, *Dreadnought* and *Polyphemus* took over from the first two English ships. The three new arrivals attacked the Spaniards independently in succession, and the engagement lasted an hour and three quarters. With her departing broadside the *Dreadnought* swept the *Principe*'s decks and Admiral Gravina fell with his left arm shattered. By half past three the line ahead of the *Principe* was utterly broken. The *Bucentaure*, the French flagship, and the giant *Santissima Trinidad* had struck and Admiral Gravina hoisted the signal for a general rally round his flagship before withdrawing to Cadiz. The frigate *Themis* took the *Principe* in tow and with eleven other sail of the line she finally limped into Cadiz, where Gravina was taken ashore to hospital. He lingered seriously ill in hospital for four and a half months as his doctors disagreed over the need for amputation of his left arm. He himself sided with those against amputation, but in early March 1806 gangrene set in and he died. In the Gibraltar *Chronicle* of 15 March the following tribute was paid to this distinguished enemy: '. . . Spain loses in him the most distinguished officer in her navy; one under whose command her fleets, though sometimes beaten, always fought in such a manner as to merit the encomiums of their conquerors'. Gravina died on 9 March 1806, and his remains were embalmed and laid in the Chapel of San Jose at Cadiz. Four years later they were moved to the Chapel of Carmen where his brother, the Archbishop of Nicaea lived, and in 1869 they were moved again to the Panteon Nacional at Madrid. With the Admiral were buried his hat, sword, baton of a Capitan General de la Armada, banner of a Knight Grand Cross of the Order of Carlos III and the flag worn by the *Principe de Asturias* at Trafalgar. Later the hat, sword and baton were removed and placed in the Naval Museum. In 1883 the remains were moved yet again by Royal Command to San Fernando, the naval yard near Cadiz, and there placed in the Panteon Nacional Marinos Illustres, where his marble tomb may still be seen.

Other relics of Trafalgar in the Museum include bits of wood taken from the wreck of the French flagship *Bucentaure* and a painting showing the combined fleets leaving Cadiz. There is also a full scale reproduction of a section of the *Santa Ana*'s mainmast, and an old model of this

ship. Nearby is a model of the *San Juan Nepomuceno*, Captain Churruca's ship, which also fought with great gallantry at Trafalgar.

Much of the museum is devoted to the naval engagements fought in the early part of the nineteenth century when Spain's South American colonies were fighting for independence. There is an interesting painting of Lord Cochrane's forces in action off Callao Lima. Later in the same century Spain's navy was to suffer severely at the hands of the Americans in the Spanish-American War. A series of photos shows the Spanish battlefleet wrecked after an engagement with American forces and demonstrates the destructive power of guns even against armour when the former were still far from the last word in their development. The battle of Santiago de Cuba spelt the end of the Spanish battlefleet and a new fleet had to be built practically from scratch. The last Spanish battleships were the *Espana* and her sister ships *Jaime I* and *Alfonso XIII* completed early in the 1914–18 war. There is an interesting painting of the name ship of the class under construction. In 1912 the Spanish fleet still retained the colour scheme of the Royal Navy of the late Victorian era, namely black hulls, white upperworks and yellow funnels.

Apart from various items of direct historical interest, there are many others of technical interest. One room is devoted to various navigational instruments going back to the sixteenth and seventeenth centuries. The forerunner of the megaphone, a speaking trumpet, contrasts strangely with a wireless transmitter of the 1930's. An eighteenth-century armoured gunboat model is a highly unusual exhibit. This vessel had a huge rounded bow which curved up to provide a completely protected forecastle. The whole of the upper section of the hull was covered with armour sheathing, and in section the vessel appears to have a tremendous tumble-home. Oars or sweeps appear to have provided the method of propulsion. Another interesting model shows a method of launching a frigate, using oxen. The oxen apparently pulled on a cable at an angle of about 60 degrees in from the shore. This cable ran round a fixed block by means of a pulley and the other end of the cable was fastened to a cradle supporting the ship. The use of such a method of launching presumably obviated the need for a sloping slipway. Of a later period models of a large ropewalk and a primitive type of floating dock are worthy of note.

Various pictures and models show ships of the Spanish Navy of the late nineteenth century. These include pictures of the cruisers *Reina Regente* and *Carlos V* and models of the former ship and also the submarine *Peral* which was built in 1887. This latter vessel went out of service in 1889 and she presumably did not prove particularly successful. Other exhibits of interest dating from the nineteenth century are the cot used by the infant king *Alfonso XII*, a signal code dated 1845, various uniforms and a model of Carraca in 1860. Of particular interest is a model of the typical Spanish frigate, the *Diana*, which was built in 1792 and scrapped in 1833. The practice of stowing hammocks along the upperdeck as a protection against splinters was also used by the Spanish navy. One particularly unusual craft was a double-ended armoured gunboat. This craft had propellers and rudders at both ends, and her upperdeck was a complete turtle back. The only superstructure was a few boats and davits. Guns were mounted broadside. This craft would appear to date from around 1860–70 but to have never gone beyond the model or plan stage. One picture, of a slightly later period, shows Edward VII arriving in the Royal Yacht, probably the *Alexandra*, at Cartagena in 1907.

Of the modern Spanish Navy there are many models. One shows the cruisers *Canarias* and *Baleares* under construction at Ferrol in the early 1930's. The latter ship was sunk in 1936 in the Civil War. Other models show the *Canarias* as completed when she had one funnel, the old destroyer *Churruca* and the even older *Alsedo*, a German U-boat of the 1914–18 war, the old cruiser *Mendez Nunez* which has recently been rearmed as an anti-aircraft cruiser, the modern A/S frigate *Audaz*, the minelaying frigates *Eolo* and *Neptuno*, several submarines and the survey ship *Tofino* carrying a seaplane aft. This vessel and her sister ship *Malaspina*, together with the smaller survey ship *Juan de la Cosa* must be among the smallest ships ever to carry fixed wing aircraft. The displacement of the first two is 990 tons and the *Cosa* 770. An interesting model is that of the modern frigate *Pizarro*, she was fitted with radar in 1947 and was the first Spanish warship so fitted. Four units of this class, the *Martin Alonso Pinzon*, the *Vicente Yanez Pinzon*, the *Vasco Nunez de Balboa* and the *Sarmiento de Gamboa* must be among some of the longest-

named warships ever. Perhaps the most unusual picture in the museum is a photo taken in 1937 showing an autogiro landing on the converted merchant ship *Dedalo*. This must certainly be the first deck landing ever made by a rotary wing aircraft.

Though Spain to-day has a small but well-balanced navy it is a service with proud traditions. The sixteenth century saw Spanish naval power at its height but even in the eighteenth and nineteenth centuries Spanish warships proved themselves to be tough adversaries. Many of the Spanish ships fought very gallantly at Trafalgar and in single ship actions such as that between the *Catalan* and *H.M.S. Mary* in 1730 or when the ship of the line *H.M.S. Stanhope* was captured by a Spanish frigate or fourth rate in 1710 the Spaniards proved themselves capable seamen and fighters. Undoubtedly in the last days of the Spanish empire the social system which decreed that officers must be members of the nobility had an unfortunate effect on the leadership of the armed forces.

DESMOND WETTERN

RIG IN NORTHERN EUROPE

(See *M.M.*, Vol: 42, p. 19.)

In the article 'Rig in Northern Europe' by Sir Alan Moore, Bt., I noticed with great interest the following passage:

'The Bermuda sail may have been derived from the lateen by discarding the mast and stepping the lateen yard. The shoulder of mutton sail was much the same except that it had a short headstick and usually a boom. The headstick is important because it grew into a gaff. These two sails... they are sometimes indistinguishable—begin to appear in Dutch pictures during the first half of the 17th century. They were carried by small two-masters, both with and without a bowsprit. These craft are so like the schooner-yacht, as we should call her, in Van de Velde's 'Fresh Gale that we are justified in supplying from it what happens not to be shown in earlier pictures.'

It would appear from the foregoing that the author had not seen a picture that I came across some years ago in the great collection of maps and charts called the *Monumenta Cartographica*. From the remarkable and detailed accuracy with which the East Indian vessels are drawn, it seems most probable that the picture was drawn on the spot, and two-masted fore-and-aft vessels, with bowsprits, staysail and jib, existed as early as 1652, and assuredly earlier. It is not necessary to supply any detail of rigging from Van de Velde's picture.

I have also in my possession an exceptionally intriguing sketch made and sent to me by E. W. Petrejus, taken from a seventeenth-century map of Amsterdam, which shows a two-masted fore-and-after which not only has a bowsprit crossing a spritsail yard, but a sprittopmast and topsail as well. It has a ship-type hull with a beakhead. Mr Petrejus seemed to think that this rig originated in Dunkirk at least a hundred years before the date of the supposed invention of the schooner at Gloucester, Massachusetts. In a print of the taking of the Silver Fleet off Havana by the Dutch, there is also another little ship which just might be a two-masted fore-and-after: this print can be found in Bowen's *The Sea*.

JAMES FERGUSON

SPEED UNDER SAIL

(See *M.M.*, Vol. 43, pp. 225–31, 341–2, and Vol. 44, pp. 64–9, 141–5)

The fact that men who have had practical experience in square-rigged ships agree in refusing to accept day's runs of 400 miles or more ought to make an 'armchair critic' such as myself hesitate before questioning their verdict. Still, are such runs really impossible?

Captain Learmont accepted a speed of 14 knots for yachts little more than 100 ft. on the waterline, this being in one case the average speed round a course; while Mr Chapelle, a practising naval architect and a serious historian, credits the 121 ft. *Sappho* with 16 knots. These figures give speeds of about 1·4 times the square root of the waterline length and on that basis a ship of 240 ft. should be able to do 21 knots, which is just what the *James Baines* claimed to have reached.

A day's run of 420 miles means an average speed of 17½ knots, or perhaps 18, if we allow for the difference in time going east. To me at least it seems quite possible for a ship to have recorded an average speed 3 knots less than her maximum.

To shift the ground of controversy a little: What is the best day's run recorded, or claimed, for a British-built ship? Lubbock gives 363 miles for the *Cutty Sark* and 358 for the *Thermopylae* and calls the first figure a 'record'. In *The Mariner's Mirror* for 1951, p. 138, Commander Tweedie quoted a letter from the first captain of the *Annandale* claiming day's runs of 381 and 375 miles in 1855 and 1856, the first during the passage from Bombay to Liverpool, the second on the way to Melbourne. I quite expect doubt to be cast on these runs, but, as the great-grandson of the *Annandale*'s builder, I should be interested in knowing if any British-built ship has even claimed to have done better.

R. C. ANDERSON

It is difficult to agree with the contention of my friend, Mr Bowness, that we must challenge the high day's runs of the American clippers because they will remain as a reproach to the British and German ship-builders. This savours of the Soviet claims that no one but the Russians invented the aeroplane! Have we accomplished so little in the sphere of sailing ships that we must begrudge credit where—and if—it is due?

If it is due. I doubt if the truth of these big runs will ever be manifest. Some are undoubtedly nonsense, but others may be true—and why not? Whether they actually took place, I obviously, cannot say, but the question of their possibility deserves further comment.

Given ideal sailing conditions (sufficient wind a couple of points on the quarter and a smooth sea), a powerful square-rigger could sail at over 20 knots. The *Herzogin Cecilie* had the necessary conditions on 2 June 1931 when she ran from the Skaw lightship to the Laesö Trindel in an hour and a quarter: that is, 26 miles at 20¾ knots. (The patent log registered 19¾ knots.) Whilst it must be acceded that this speed was only maintained for a relatively short time, since it dropped to 17 knots when she changed course further to the south-ard, there is no doubt that, had she been able to sail along some hypothetical, straight canal of infinite length in such weather, she would have covered 498 miles in 24 hours. In fact, in such calm water, she would probably have topped the 500 mark. (I assume a north and south canal, to obviate any difference in time!)

To me, this is quite credible. Unfortunately, there is no sheltered stretch of water sufficient in extent for such a run, even assuming that the necessary conditions obtained. When becalmed off the Cape Verde Islands the *Pommern*, struck by a squall, once ran 3 miles by log in exactly 10 min. I noted it myself, being at the wheel. It proves nothing but, if it be argued that so short a run and so short a time is open to inaccuracy, the fact that much of her sail was blown out in the first few minutes leads me to suppose that, for a short burst, she was moving through the water in excess of 18 knots.

I recall other such occasions, and cite them to demonstrate that these full-built four-masters could work up to a speed requisite for a 400-mile run but, if the wind held its force, sea and swell rose in a surprisingly short space of time to knock them back to a maximum of 13–15 knots. The *Priwall* was exceptional in exceeding 15 knots and, for practical purposes, an average of 14 knots over 24 hours could be assumed to be a top limit.

I remember the *Moshulu* running 61 miles by patent log in a 4-hour watch, despite a *fairly heavy sea*. There was no question of straining or stress. Neither master or mates were on deck at all. (It was New Year's night, which might account for this lamentable state of affairs.) It amounted to sheer driving in such wind and sea. The wind eased very considerably in the last hour, so that the average speed for the first three was so much the greater. I am convinced that, had she been under the lee of the Skaw, as was the *Herzogin Cecilie* when she made her great speed, the *Moshulu* would have sailed as fast as, or faster than, that vessel.

The four-masted full-rigger *Lancing* is said to have maintained 18 knots for 72 hours in 1890–1, and to have run 76 miles in 4 hours on another occasion. These claims are no more authenticated than those of the Americans, so far as I am aware. The premise is that on at least one day—and probably two—she must have run about 420 miles. (I do not know her latitude on this occasion.)

I believe that, at the time, she was the longest sailing ship afloat, which would have militated to her advantage, whilst as a converted mail steamer, she was presumably finer in her lines than most four-masters. If the McKay clippers had not the length, I would hazard a guess that the relationship of their sail areas to their under-water form amply compensated for this. As a more recent occurrence, the performance of the *Lancing* should present less difficulty for investigation. If substantiated, it would provide valuable light on the whole question.

The argument that the American clippers did not produce passage times which accorded with their fast day's runs is simply not valid. I was surprised that it was advanced by Captain Learmont, since there is a tremendous element of luck implied in holding good winds *throughout* a long sailing passage. Only one spell of calm or head-wind is needed to mar a record and, conversely, a fast passage can be achieved without any exceptional 24 hour run being made.

Further, many ships have probably sailed, in 24 hours, distances in excess of their best noon to noon run. One correspondent appeared to be under the impression that there was a certain constancy about the Westerlies in the Southern Ocean. Reference to almost any log book will expose this fallacy. There is also an element of luck involved in maintaining ideal conditions even from noon to noon. I recollect running 298 miles over the clock from noon to noon by observed positions. This was in excess of the patent log. Yet, by log, we ran 336 miles from 8.0 a.m. to 8.0 a.m. The application of such an example to a faster ship demonstrates that chance is a greater factor in a day's run than most people think.

It is probably true to say that the effect of pitching, even in a following sea, reduced the speed of a full-built vessel by anything up to 5 or 6 knots, when sailing at her hardest. No one who has stood on the foc's'le head of a modern four-master has any illusions about the shock each time her bow—full in its form—smacks down into the sea, thus creating an endless succession of 'braking' actions. Naturally, the amount of pitching is not comparable with a vessel close-hauled, but its effect is exaggerated by the higher speed and tends to neutralize the forward thrust imparted by the sea itself. It follows that, the finer the form (for'ard in particular), the less that shock will be, and it is a commonplace that the extreme American clippers, for whom these high runs were claimed, were unique in the concavity of their bow lines.

Thus, if a ship like the *Herzogin Cecilie* could sail at close on 20 knots in calm water (with a block co-efficient of 0·78) which would reduce to, say, 14 or 15 knots in deep-sea sailing conditions, these clippers, with so much the less braking action, should run at 17 knots easily. Howard Chappelle has stated, with truth, that the force required to drive a clipper at a given speed was less than that required to drive a more fully-built ship. I know of only one force which drives a sailing ship—wind. If there is less wind, there is less sea, and thus even less braking action, so that their advantage in this respect was so much the greater. (When taking account of log-books, it is necessary to remember that the smaller the ship the greater is the tendency to exaggerate the force of the weather.) To the 17 knots I have postulated, add the effects of the Westerly Drift, and it is, perhaps, astonishing that more and greater 400 mile runs were not recorded.

It has been said (by Captain Learmont) that a wooden ship would open up if driven to such an extent. This is conjecture. No one can speak with experience on this subject to-day. There is ample proof that these ships *were* driven hard and that they often ran into trouble. But, given a measure of luck, there is no reason why it should not have come off sometimes. I believe that it did.

ALEX. A. HURST

The maximum speed of sailing ships 100 years ago raises some interesting questions, but it hardly seems important enough to involve national honour or to impute dishonesty at this late date to those who can no longer defend themselves. I fail to see why it should 'be for ever a reproach to British and German designers, builders, and seamen' (*M.M.*, Vol: 44, p. 144) that the Americans chose to build ships that were bigger and had a higher maximum speed than the British and German owners required.

It seems obvious, even to one who is not a naval architect, that vessels like *Lightning* and *James Baines* should be faster under optimum weather and loading conditions for each ship than vessels like *Cutty Sark* and *Preussen* (cf. *op. cit.*, p. 145). To believe otherwise would seem to be

a denial that length and form limit maximum speed. But what really mattered to the owner was the average speed carrying a useful load on a voyage.

Are British and German designers and builders reproaching themselves to-day because the *United States* has a higher recorded maximum speed than the *Queens*?

A. LAMONT

(Several other readers are thanked for their letters on this subject, which must now be considered closed.—*Editor.*)

THE PREAMBLE OF THE ARTICLES OF WAR

(See *M.M.* Vol. 43, p. 330)

Professor Christopher Lloyd's note on the preamble to the Articles of War should soften the disappointment of the hardy traditionalists when they come to read the new Naval Discipline Act. They will now realize how much that of 1661 owed to the Navigation Acts of 1651 and 1660 and how the version of the preamble they know so well dates no further back than 1749. It is a matter of small importance, but it seems doubtful whether we should read into the 1661 preamble a reference to the Merchant Service. The Act as written, and as first printed, has no comma after 'Navies', and in those days they had no apostrophe s to mark the possessive case. It would seem too, the term 'man-of-war' covered the ships which were *Rated*, while 'forces by sea' did duty for the small fry. How the young captain of a Fireship must have chuckled, as, after priming her and sending all his spare hands to one of the Great Ships, he stood for the enemy and called to mind that officially he was no man-of war. However, Professor Lloyd may be right. The thought of being caught posing as a grammarian frightens me.

Although a comparison of the preambles of the Naval Discipline and the Navigation Acts was the main intention of the note, we are naturally led to a consideration of the relationship between the two services, Royal and Mercantile.

The Royal Navy's first duty had always been the protection of the Sovereign, and for that reason it had kept the Narrow Seas. In early days the royal ships would have been in charge of masters experienced in coastal and cross-channel trade who carried the soldiers with their banners, trumpets, bows, arrows and battleaxes wherever they wished to go—within reason. The war over, those soldiers who had survived were brought home with their trappings, and the King's ships hauled into the mud in some friendly creek and left to the care of the shipkeepers and the worms. But the masters with their men returned to the coasting trade for their bread was upon the waters, and they did but discharge one cargo to make room for another, and away to sea again.

It is not unlikely that when in 1588 Queen Elizabeth strove to keep the fleet in the Channel against the advice of her sailors, she had in mind the traditional use of the Royal Navy. When the great day came, in support of her own thirty odd ships there were about a hundred and sixty merchantmen described at the time as being present 'only to make a show' and any credit for the defeat of the Armada given to the Queen's own. Of course the assessment may be correct; it certainly has been very readily accepted and often repeated. Yet it does not seem to fit very well with what we know of the merchant seaman of that day. We know that three years after, the Lord Admiral told the Straits merchants to write overland to their ships in the Mediterranean, warning them to have a care how they came home, for the enemy lay in wait for them. He offered no armed protection, obviously reckoning they would fight their way out. But we have more direct evidence of the fighting quality of these men who traded South.

Before the Interregnum, Graves the mathematician, in what he called his *Incital to the nobility and gentry of England to the Study and practice of Navigation*, wrote of 'The valour and loyalty of these men, making him to wonder how men so low in their birth and education should come to such height of Resolution that if for these many years there has been anything performed full of courage and worthy of our ancestors if has been undertaken and accomplished by them. And in this kind they have often in the Streights given such a demonstration of themselves that I may

justly say, in their veins much of that which, if we call things by their right names, is true gentility.' That was written of the merchant seamen of 1630–40 who had the temerity to forsake the Narrow Seas and venture up the Straits. Graves pleaded 'not to let that Profession which is the Honour & Security of this Kingdom be borne up only by the meaner and inferior rank of the people.'

Captain Nathaniel Boteler was shocked when some of these same fellows took to styling themselves Captain. He thought they should be 'brought before a Martial Court' for their presumption, reckoning it 'as if some foolish arrogant ass should entitle himself my Lord, or Sir John'. If any of these sailors when home from sea ever got wind that Captain Boteler, an officer of the Military Branch of the Navy, had set himself up as an instructor in seamanship to admirals and the like, they would have been quietly amused, and laughed a little, in secret of course so as not to hurt the brave captain's feelings.

As in medieval days masters of coasters had taken the Royal fleets to sea, so the men used to handling larger deep-water vessels went on board the Tudor men-of-war and took charge. It was they who had handled *Ark Royal* and the rest when they came tumbling out of Cawsand Bay and Hamoraze in such a hurry. Even if there is any truth in the scandalous story that the admiral, who wore his flag in the *Revenge* went on bowling on the bowling green of *The Blue-eyed Sailor* after he had been told the Spanish Armada was in sight, the Service would not have suffered. Anchor would have been apeak and everything sheeted home the moment the Admiral was piped aboard. We may be sure the master of the *Revenge* knew his business, for the admiral himself had been in the trade and would have chosen the right man to handle the sailors.

In the two reigns following Queen Elizabeth's, most of the master mariners and their men would have reverted to the Merchant Service to earn their daily bread. They returned in fair numbers during the Interregnum: a few to attain flag rank, some to command, and the rest to realize for the first time there was dawning a hope of permanent employment for masters in the regular Navy. At the tail end of the Civil War came the campaign in Scotland, followed immediately by the First Dutch War, the Spanish War, and throughout, an unending fight with Argeirians, Dunkirkers and Dutch capers. There was full employment for sailors in those days.

Besides showing a large increase in the Fleet Dr R. C. Anderson in his *List of Ships*, names 110 vessels hired between 1649 and 1654, and so far, no one has suggested that the hardheaded people who ruled in Whitehall at this time hired them for decorative purposes only. Indeed the wars in Ireland and Scotland required a considerable number of small, armed, ships for convoy duty. As well as this material aid to defence, crews had to be found for the many new men-of-war. The New Model Army made its contribution; but of course it was from the merchant ships the main body were pressed. However, in the cheerful light of success in war, many of those who had come reluctantly became loth to depart. For the young seaman there was now fair prospect of promotion in a well ordered Service; and for the Navy, there was hope that in future it would be able to train its own people. Unfortunately that hope was long in fulfilment. For as the Puritan rule ended, the country found itself in possession of a Navy full of Battle Honours certainly, with (as surely) its Treasury full of emptiness. And that was the inheritance of King Charles II.

So for the remainder of the seventeenth, and right on into the nineteenth century; in peace time, the King had to make-do with those who were prepared to keep cheerfully whistling for their pay and hoping for promotion. At the first breath of war, he had to rob the North Country Colliers (that famous nursery for seamen which produced James Cook), of men who could lead the crowd of tinkers, tailors, bricklayers and basketmakers which had been bundled on board by the pressgang. So much for the mariners; now we turn particularly to the Masters.

On 15 August 1805 an Order in Council was made to the effect that in future when the Masters and Wardens of Trinity House sat to examine a man as to whether he was fit to take charge as master of one of His Majesty's ships, they were to have sitting with them a Captain, Royal Navy. To this the Brethren replied to the Admiralty (who had forwarded the Order through the Navy Board) that until this threat of control and interference was withdrawn, they would entirely suspend the examination of masters for the Navy. Many students of naval history may be a little shocked at such an answer when they consider to whom it was addressed and that it concerned an Order of the King in Council. Perhaps they will be a little less shocked and will better understand

the bluntness of the reply when they learn how, for nearly three hundred years Trinity House had been ensuring that every one of the king's ships had on board a master mariner capable of taking her to sea, and, under God, bringing her safe to port again. Although their charter had been granted by King Henry VIII, there can hardly be a doubt that (like Christ's Hospital, Bethlem, St Bartholomew's and St Thomas's) the Elder Brethren took over the work of a Religious Order, one of whose duties had been to lighten the darkness of the homeward bound, a duty which as all the world knows, this ancient brotherhood carries out to this day.

The reason for the Admiralty's projected intrusion was the intention of examining a candidate wishing to go as master in the Navy in the theory of navigation and of his ability to make Lunar observations. The Brethren said such an examination should be held at another time and another place. They were not being unreasonable. They said the first purpose of their examination had always been to provide a man capable of handling a ship, large or small, according to their judgement—a practical seaman. Then they had questioned a fellow as to his acquaintance with the ports, islands and faraway coasts of the world. One they might find knew his way along the Christian shore as high up the Straits as Scanderoon, or on Barbary side as far as Tripoli; another the Guinea Coast, of Kinsale, Cadiz or Carribee, or even further—a good pilot.

Some thousands of the certificates of these men have been preserved. While their capabilities as seamen and pilots are clearly set down, there is no word of their abilities as navigators. From this we may infer they used traditional methods of finding their way when out of sight of land; observing the sun and not paying as much attention to the stars in their courses as they should have done. As to the moon, they had been told that by observing carefully her motions they would obtain their longitude; but sailors in little ships had discovered that with the instruments they had and the patience they possessed, the method was impracticable and reliance on dead reckoning continued to be the only help for their easting and westering. Trinity House would have known how dim the prospect of making headway against the conservatism of the sailor, and how unlikely would be the arousing of any sudden enthusiasm in the shipowner for supplying all his ships with chronometers. As the War had reached a crisis, it was no time for revising a curriculum or appointing a new board of examiners in the theory of navigation. So Whitehall could do no more than tell the Navy Board to suspend the Order in Council and look hopefully for peace, when the Navy might take over the examination of its own officers.

As the war ended, which was to be the last the Navy was to take a major part in for nearly a hundred years, there were some 500 master mariners employed, only 225 of whom were entitled to half-pay when not holding a warrant for a particular ship. The rest of the masters, perhaps 275 of them returned to the Merchant Service. Longitude may not have been their strong point, and likely enough they may have been awkward in handling a musket, but they were sailors and had been an important part of the King's forces serving at sea.

GREGORY ROBINSON

THE TRESCO VALHALLA

On a recent visit to the Isles of Scilly on behalf of the Society, I was given by Commander T. M. Dorrien Smith the following list of exhibits in his Museum of figureheads, etc., from ships wrecked on the Isles. As the Society is interesting itself in the preservation of these most interesting relics, it is to be hoped that members may be able to supplement the information about the ships named in the list and the circumstances in which they came to be wrecked.

List of figureheads	Date of wreck
1. *Polinarus*, barque	27 Dec. 1848
2. *The Mary Hay*, barque	1852
3. *Roseville*, a French prize	1855
4. *The Chieftain*	1856
5. *Friar Tuck*, China Tea Clipper	1862
6. *Prima Donna*, a Spanish barque	1870

	List of figureheads	Date of Wreck
7.	*Gilded Salmon*	1872
8.	*River Lune*, barque	1879
9.	*Independencia*, an Italian barque. Also the nameboard	1881
10.	*La Gauloise*, a French barque	1887
11.	*Bernardi*, an Italian vessel	1888
12.	*The Jane Owen*, built in St Mary's	1890
13.	*Serica*, steamer	1893
14.	*The Flakland*, four-masted barque	1901
15.	*The Volunteer*, coaling vessel	1910
16.	*Alexander The First*	Date unknown
17.	*Lion*, and parts of the lion's legs	Date unknown
18.	*Dolphin*	Date unknown
	Also in the Gardens of Tresco Abbey	
19.	Mexican Eagle, from a French vessel, name unknown	Date unknown
20.	Neptune, figurehead of S.S. *Thames*	4 Jan. 1841

	List of fiddleheads, and other ships' relics	Date of wreck
1.	Indian puffers, thought to have come from the West Indiaman *Thunderer*, or *Boreas*	? 1700
2.	Quoin, from the Spanish ship *San Joseph*, and thought to have come from *H.M.S. Colossus*	1798
3.	Stern board and stone mortar from *H.M.S. Colossus*	1798
4.	Two brass signal guns, and piece of iron knee with American eagles embedded from S.S. *Schiller*	1875
5.	Fiddleheads and nameboard of the *Award*	1861
6.	Fiddlehead of the *Eliza*	1867
7.	Sternboard from the *Maipu*, a brigantine	27 June 1879
8.	Name board of the *Corea*, a Portuguese clipper	1890
9.	Fiddlehead of the Norwegian barque *Sophie*	1896
10.	Fiddlehead of the Italian barque *Lafaro*	February 1902
11.	Stern of a boat belonging to the *Turquoise*, torpedoed and sunk by a German submarine	1915
12.	Nameboard of the *Intrepid*	Date unknown
13.	Nameboard of the *Oregon*	Date unknown
14.	Nameboard of the *Richard Browne*	Date unknown
15.	Nameboard of the *Bosphorus* or *Turk's Head*	Date unknown

E. W. BOVILL

QUERIES

12. (1958.) When did the term 'scow' turn up, and what is the difference between a scow and a schooner?

W. MOLCH

13. (1958.) THE ORIGIN OF THE TERM 'JURY-RIG'. There seem to be several conflicting theories, and the term has been in use for so long that definite evidence is unlikely to be forthcoming for want of sources.

The *Oxford English Dictionary* considers the word to be either a corruption of an earlier word or a jocular appellation invented by sailors. It does not support a derivation from 'injury-mast'. Examples given are from 1616 and 1627, while Mainwaring in 1623 also gives its usual sense.

Jal's *Glossaire Nautique* gives three possible origins, from the French *jour* = day, quasi *joure* = temporary; from the Latin *jovare* = to assist; or from jarra or jarro, a wood used for spars in the thirteenth or fourteenth centuries, and the word later extending its meaning to include all spars.

It would be interesting to know of any other views on this subject.

A. W. H. PEARSALL

14. (1958.) SHIP *CHEVIOT*. My uncle Robert Allan emigrated to New Zealand in the ship *Cheviot* in 1862. It was not a luxury voyage. Robert Allan farmed at the mouth of the Awatere River, where the town of Seddon now is, and later at Drumclog near Blenheim.

I shall be glad to get any particulars of the ship, its owners and master. The owner is said to have been Potter of Liverpool, and provisions ran short before the end of the voyage.

J. A. STEWART

15. (1958.) COLUMBUS'S MAP. In the *New Scientist* of 22 May 1958, American Correspondent J. Lear writes:

'Before Christopher Columbus set sail for the west in 1492, he is supposed to have studied a strange map that Alexander the Great discovered in Egypt. The shrewd old sailor may have known what the ancient chart was a map of, but explorers and scientists who followed him couldn't figure it out. One man wrestled with the puzzle for seventeen years and understood as little at the end as he had at the start. Others were just as frustrated in their pursuit of the secret. At last, in August 1956, the cartographer and archeologist, Arlington H. Mallery, reported to the Georgetown University Forum in Washington D.C., that he had worked out a projection and had come upon plenty of reason for Columbus to be close-mouthed. The map showed Greenland and Alaska, both coasts of South America, and a great swath of Antarctica free of the Antarctic icecap.

Who did the mapping? No one living can tell. But the mappers were accurate where accuracy would be least expected. That much has been confirmed by profiles of Queen Maud Land drawn by U.S. Navy blasters from seismic reaction to explosions in the present-day Antarctic ice.

When was the mapping done? Mallery's guess is 5000 or more years ago.'

What is actually known about this remarkable map?

PETER CLISSOLD

16. (1958.) 'THE VIKING STONE.' In his very interesting book *The Sea and its Mysteries* the author, John S. Colman, writes:

'The last Norse voyage to the American mainland of which we have any record was organised in Norway in 1356: it never came back, but traces of it have been found in a runic inscription in a stone in Minnesota 1200 miles from the nearest sea in Hudson's Bay.'

I had supposed that this stone was not considered to be authentic. Is it generally believed to be genuine and, if so, what do the runes tell us?

PETER CLISSOLD

17. (1958.) 'DRAKE'S TABLET.' Some time ago in the *Geographical Magazine* it was related that a picnicker in Drake's Bay in California chanced upon a half-buried metal plate which he took home. On being cleaned, writing was disclosed, revealing it to be the original tablet engraved by Drake and set up by him when he claimed the neighbourhood for Her Majesty Queen Elizabeth I.

Where is this plate now? Is it accepted as genuine?

PETER CLISSOLD

18. (1958.) In the *M.M.* of 1954, p. 242, O. Parkes refers to the Greek battlecruiser *Salamis*; in the same volume, on p. 325, W. J. Steeple refers to the *Salamis* as a battleship. This is not the first time I have found divergencies on the classification of this vessel. The *Taschenbuch der Kriegsflotten*, Vol. XVI, Jahrgang 1915, J. F. Lehmanns Verlag, München, p. 82, refers to the *Salamis* as battleship granting her 40,000 metric shaft horsepowers which would be half as much of those given to the actual battlecruiser *Von Der Tann* of about the same size. I would like to know: (1) whether the *Salamis* was in fact a battlecruiser or meant to be one; (2) why the German Navy did not complete her for its own use, as the *Salamis* was launched on 10 August 1914. It definitely needed more capital ships in World War I, though it is open to well-founded doubt, whether one ship would have altered the deadlock it was in.

W. MOLCH

ANSWERS

14. (1950.) In case the book *We build a Navy*, by H. H. Frost, U.S. Naval Institute, Annapolis, 1940, can claim to be exact, the squadron of Commodore Morris early in 1803 consisted of *New York*, *Enterprize*, *Adams*, *John Adams* and *Chesapeake*. The *Chesapeake* returned to the United States in March 1803.

W. MOLCH

2. (1955.) H. Kutscher: *Admiralsrebellion oder Matrosenrevolte? Der Flotteneinsatz in den letzten Tagen des Weltkrieges*. Stuttgart, 1933. R. Stumpf: *Warum die Flotte zerbrach. Kriegstagebuch eines christlichen Arbeiters*. Berlin, 1927.

W. MOLCH

6. (1958.) Dupuy de Lome's Trireme. At p. 56 of *Historie de la Marine*, published by *L'Ilustration*, Paris, 1934, there is a reproduction of a photograph of this trireme. The caption to the illustration states that the vessel was built at Paris and launched in the Seine in 1865 by order of Napoleon III and that the photograph is in the Museum of Decorative Art.

E. K. Chatterton, in the new edition (1923) of *Sailing Ships and their Story*, on p. 70, gives a brief description of the trireme and states: 'that she was actually experimented with on the sea at Cherbourg in good weather'. A footnote gives the following: 'A model of this ship is to be seen in the Louvre. See "Musée Rétrospectif de la Classe 33. Matérial de la Navigation de Commerce à l'Exposition Universelle Internationale de 1900, à Paris Rapport du Comité d'Installation".'

ALLAN E. BAX

9. (1958.) *Tomb of Hardicanute*. An article in the *Winchester Cathedral Record*, no. 25 (1956), by H. S. Altham, mentions that Bishop Fox, *c.* 1525, incorporated in the base of his choir screen the tomb, *inter alia*, of Hardicanute. Fox was also responsible for the Mortuary Chests above the screen containing the relics of Saxon Kings among them King Canute (*Record*, no. 2, 1933). Could the ship mentioned have been added in the sixteenth century?

There is an eighteenth-century ship on the east side of the tomb of Admiral Sir Isaac Townsend 9, d. 1731), latterly resident Commissioner in H.M. Dockyard at Portsmouth (*Record*, no. 14, 1945). The tomb being in the recess in the south transept, the carving is apt to escape notice. I have seen no good illustration of the ship in question.

A. R. CROSS

REVIEWS

Van de Velde Drawings—in the National Maritime Museum. By M. S. Robinson. Cambridge, 1958. 12 × 9½ *inches*. 460 *pages* (*including* 169 *plates*). Price 12 guineas.

Anyone studying the ships of the second half of the seventeenth century is bound to obtain a very large proportion of his knowledge of the outward appearance of their hulls from the drawings of two men, father and son, both named Willem Van de Velde. This is true of ships in general, and might be put even more strongly where particular ships are concerned. These two artists are almost unique—the adjective is justified by their close relation as a pair—in having left us a great number of named portraits of men-of-war, English, Dutch and occasionally other nationalities as well. Thanks to them we probably know more of the appearance of individual ships of our Navy and the Dutch in the reign of Charles II than we do of those of any period before the first appearance of Jane's *Fighting Ships* in 1898.

These ship-portraits are definite historical documents and so are the many drawings of the battles of the three Anglo-Dutch wars, or at least of those where the artist was actually present. We may feel that a series of plans would have been easier to understand, but for this we have no right to blame the artist. As Captain Warnsinck showed in his book on the two battles of Schooneveld, Van de Velde's drawings, if used intelligently, can be of great help towards understanding the tactics of these complicated actions between enormous fleets. Besides, plans would have had none of the attraction of these long drawings with their lines of ships stretching away into the distance, the last of them little more than 'a squiggle and a blob', and yet obviously a ship on a definite point of sailing. For successful economy of effort in the use of pencil and wash these distant ships stand alone, though the Chevalier de Martino achieved something almost as remarkable with pen and ink in his illustrations to *The Captain of the 'Mary Rose'* at the end of the nineteenth century.

This economy of effort helps to explain the speed at which the elder Van de Velde must have worked. Perhaps we need not believe that he did indeed finish eight long drawings of a fleet of yachts between noon and sunset (4 p.m.) on 29 November 1677, but this is an extreme case; there can be no doubt that he worked very fast and—as far as he can be checked—very accurately. In both respects he deserves our gratitude.

Roughly speaking, 2500 drawings by the two artists are known to have been preserved in various collections, 2000 of them in England. The present catalogue lists 745, and to these there have recently been added very nearly as many given by Sir Bruce Ingram, so that the National Maritime Museum now holds more than half the world's stock. Such a collection demands thorough cataloguing and its first half has certainly received it. We may hope that in due course Mr Robinson will produce a second volume dealing equally thoroughly with the Ingram collection and any other possible acquisitions.

This first volume has been planned on so generous a scale that it forms a striking contrast to the purely business-like' catalogues produced up to now by other departments of the Museum. Perhaps they too will be allowed to 'spread themselves' later on; in any case, we must be grateful for what we are now given, or rather offered, at a somewhat frightening price. We have much more than a mere catalogue, for the drawings are listed both by date—as far as this is possible—and by subject, with full descriptions and with translations of the Dutch inscriptions, some of them by no means easy to read or interpret; while there are 169 plates, showing more than twice as many drawings, wonderfully well reproduced. So much we might reasonably expect, but we find a good deal more. We have several pages devoted to watermarks, others to coats of arms—so useful in identifying Dutch ships, a glossary of technical terms with their Dutch equivalents and finally a most attractive collection of drawings by the author's father, Mr Gregory Robinson, illustrating the various types of seventeenth-century vessels, large and small.

Three consecutive illustrations on pp. 272–3 may be mentioned as offering typical points of interest and the possibility of argument. The *Henry*, drawn in 1661, has in her Union flag the red saltire usually said to have appeared first in 1801. This is by no means the only known example of this apparent anachronism, of which no one has yet offered a satisfactory explanation. The drawing of the *Sovereign*, here ascribed to the same date, looks very much as if her characteristic quarter-gallery had been drastically altered in her recent rebuilding, yet another made in 1672 shows the old form. Altogether the stern looks distinctly later than 1661 and far more likely to belong to 1684, when the ship was again rebuilt at Chatham. The same stern, or one very nearly the same, is to be seen in a detailed 'architectural' elevation formerly in the old Royal Naval Museum and now among the draughts in the National Maritime Museum. This is clearly stated to show the stern of the first *Royal Sovereign*, but agrees with no other known representation of that ship at any stage in her career. The next drawing, that of the *Expedition*, shows a stern with a blank shield without supporters. It also is ascribed to 1661, but seems at first sight more likely to belong to the days of the Protectorate. Unfortunately the ship was not in the Restoration fleet, and though she was in Danish waters in 1658 and 1659, it is doubtful if Van de Velde had any opportunity of drawing her there. Perhaps the date 1661 is correct after all, and the ship, which had been laid up, had not yet had her stern-decoration brought up to date.

Mr Robinson has done a very big piece of work and done it very well; he should not stop there, but should at least deal with the Ingram collection in the same way. It might even be suggested that a sort of 'Corpus' of all known drawings by the two artists, particularly of their ship-portraits and battle-pieces, would be worth producing. Perhaps, though, this is too much to demand.

R. C. ANDERSON

H.M.C.S. Naden. Naval Barracks. A History of its Work, Senior Officers and Ships. By Frederick V. Longstaff. Published by the Author, at 50 King George Terrace, Victoria B.C. 2nd edition, 1957. 9 × 6 *inches.* 64 *pages;* 8 *full-page illustrations.* Price $2.50.

This little book, in addition to being a history of the naval barracks and establishments at Esquimalt B.C. and the birth of that part of the Canadian Navy, deals with the formation of the R.N.C.V.R. from 1914 to 1923. There is also much in it dealing with the ships of the Royal Navy which have visited or served on the Pacific station from 1837, when the station was first formed, down to 1905 when the last ships were withdrawn and the dockyard at Esquimalt closed down.

In 1910 the naval establishment at Esquimalt was handed over by the Admiralty to the newly born Canadian Navy, together with the old cruiser *Rainbow*, which was to serve as head-quarters of the Senior Naval Officer.

The name 'Naden', by which the naval barracks came to be known, derived from an old sailing schooner of 100 tons which had originally been attached to the Canadian Surveying Service. She was loaned to the Canadian Navy after World War I, and became a sail training tender to the naval college, then established in the dockyard. She eventually succeeded the old cruiser *Rainbow* as the nominal depot ship, on whose books officers and ratings were borne when serving at Esquimalt.

From 1932 to 1939, though the number of officers and ratings was small, especially on shore, the training at sea was of a high standard, in view of the rather meagre facilities provided.

The one destroyer and one mine-sweeper—the only ships available—were often away on long or short cruises, year after year. Life on board was pretty tough from all accounts; but it turned out many fine men who made the Canadian Navy what it is to-day.

In 1936 the old wooden constructions in the dockyard were replaced by modern brick buildings which now house the administration staff for all departments and provide accomodation for officers and men.

The Royal Navy's association with Esquimalt goes back to the year 1846, and from that time until H.M. Dockyard was transferred to the Dominion Government, there has been a continual record of the British men o'war serving on the west coast of North America. H.M.C.S. Naden, as the Naval establishment is now called, is thus in the direct tradition of all those gallant ships from Drake's *Golden Hind* down to those of the present day.

Included in the contents of this book is a list of all the flag officers who commanded the old Pacific station, together with their flag-captains, from Rear-Admiral Charles Ross in 1837 down to Commodore James Goodrich, who had the melancholy duty of hauling down his broad pennant and closing down the station in 1904.

It is interesting to note that the first head-quarters of the Pacific station in 1837 was at Valparaiso in Chile! The naval base at Esquimalt was not authorized till 1865.

The author, Major Longstaff, must have spent much time and labour in his research for material for this book, which will be of great value as a work of reference to everyone interested in the formation and growth of the Royal Canadian Navy.

There is a very complete and comprehensive index, and the illustrations dating from 1885 are of special interest.

A. MACDERMOTT

Ships and Sailors: a Catalogue of Paintings, Prints, Models, Relics, etc., Illustrating Events in Maritime History. $8\frac{1}{4} \times 5\frac{1}{4}$ *inches;* 184 *pages; half-tone illustrations; index.* The Parker Gallery.

This illustrated catalogue is valuable for two reasons. It provides a miniature conspectus of many aspects of sea history: e.g. naval actions, men-of-war, yachts, uniforms, voyages, whaling, portraits, weapons, etc., and it indicates the current price of a wide range of objects which appeal to collectors. It seems likely that the most under-valued, or rather low-priced line, in days of inflated values, is the medal, service and commemorative. The price of the print, particularly when in fine condition, appears to be rising, but it is still reasonable. There is much to be learnt from this highly practical guide for purchasers.

OLIVER WARNER

Barbary Legend. War, Trade and Piracy in North Africa 1415–1830. By Sir Godfrey Fisher. Clarendon Press, Oxford. x + 349 *pages; frontispiece and map.* Price 50*s.* net.

The scope of this work is accurately defined in the subtitle, and more explicitly in the preface as 'an examination of our relations with the Mediterranean, or Turkish, part of Barbary in the light of contemporary evidence, especially from English sources'. For most of the period, the Barbary States comprised the three Turkish regencies of Algiers, Tunis and Tripoli, together with the empire of Morocco, but from the early sixteenth century the chief interest is inevitably focused on relations with Algiers. Apparently, the author's main preoccupation is to debunk the widely held belief that the Barbary Corsairs were invariably the 'scourge of Christendom' and that Christian mariners were always innocent victims, or, alternatively, righteous avengers who periodically administered sharp lessons, such as Blake's bombardment of Tunis in 1655. He strives to show that the Barbaresques were usually more sinned against than sinning, and that conditions of life in the regencies were often better and on a more civilized plane than in contemporary Christendom.

The author's debunking of the Barbary Legend is quite convincing up to a point. He has no difficulty in showing that European piracy was often as bad, or even worse, than anything the Muslim corsairs were accused of; and he also shows that the latter usually treated their prisoners far more humanely than did the Christian victors when positions were reversed. He likewise proves that European governments, and individual ship's captains, often acted with gross and inexcusable bad faith in their dealings with those whom they so readily stigmatised as perfidious Moors or Turks. Finally, and this is not the least interesting feature of the book, he shows that Algiers, Tunis, and Tripoli were not merely harbour-states with no hinterland worth mentioning, but that the flourishing grain-trade driven by Algiers in particular was at times of crucial importance in the history of the Mediterranean.

This said, two serious criticisms remain. In the first place many passages are written in a highly allusive and cryptic style, and there are far too many confusing digressions, and side-swipes at previous writers. There is no central thread or strand of narrative which can be clearly followed, and the author too often abandons an interesting discussion of a particular theme and gets bogged down in unimportant details. For example, on pp. 51–55, it is quite impossible to follow the operations of De Moncada, 'the newly-appointed Spanish General of the Sea', or to gather how he came to an apparently disastrous end at Amalfi in 1528. On p. 152, the sentence: 'The humiliating result of Duquesne's illegalities at Chios in 1681 served as a warning in 1729', which has no apparent connexion with its context, is supported by a footnote reading: 'H.M.C. MSS. of Lady Du Cane, p. 244. Louis paid compensation. See Vandal, Sue, d'Arvieux, &c. Tripoli's special responsibility for combating Venice and Levantine piracy requires study. Downshire MSS. i. 348, &c.' The bewildered reader is left wondering to whom Louis (XIV?) paid

Compensation and why, and what on earth Tripoli had to do with Duquesne's 'illegalities' at Chios, which receive no other mention.

Secondly, as frequently happens with writers who have something new and rather startling to say, Sir Godfrey Fisher gives the impression of considerably overstating his admittedly strong case. Granted that Christian morals and behaviour were all too frequently lower than those of the Barbary corsairs, the latter were not always such perfect gentle knights as they appear in these pages. If the Muslim galley-slaves in Christian hands had a remarkably thin time of it, so, in spite of the author's insinuations to the contrary, did Christian galley-slaves in Algiers. One of the best accounts of Algiers in this connexion is by a Portuguese soldier, João Carvalho Mascarenhas, who was a slave there for five years (1621–26), and whose *Memoravel Relaçam* was published the year after his release. His account of the hardships of a galley-slave's life is all the more trustworthy as in other respects he gives full credit to the Turks of Algiers for the humanity shown to their captives in the first instance, and particularly to the consideration with which the women prisoners were treated. Moreover, while forcible methods were not usually employed by the Barbary corsairs to induce their captives to embrace Islam, they certainly were used at times. See, for instance, John Rawlins's eye-witness account of his captivity at Algiers in 1621–22, printed in Purchas's *Pilgrimes* (pp. 890 of the edition of 1625), which Sir Godfrey Fisher characteristically ignores, though listing Purchas in his bibliography.

The bibliography, incidentally, is one of the strong points of the book, being not just the usual string of titles, but an annotated list, pointing out the relative strength and weakness of the principal works on this subject. It does not purport to be all-inclusive, but besides the omission of Carvalho Mascarenhas's above-quoted work, that of R. E. J. Weber's *De beveiliging van de zee tegen Europeesche en Barbarijsche zeeroovers 1609–1621* (Amsterdam, 1936) is to be regretted. Reference to this standard Dutch work would have strengthened the author's arguments in various ways. His contention that the Barbary corsairs were often blamed for the piracies of their Christian counterparts finds amusing confirmation on p. 54 of Dr Weber's book. Mention is there made of a Dutch captain's detailed report of his capture of a *European* pirate, which the Admiralty of the North-Quarter forwarded to the States-General with a covering letter describing this feat as the capture of a *Turkish* pirate! The 'singular dearth of reliable figures for Algerian ships' between 1581 and 1660, of which the author of *Barbary Legend* complains on p. 167, can also be remedied in part by consulting the figures given on pp. 53–54 of Dr Weber's book. The crude map of 1750, which is reproduced at the end of *Barbary Legend*, might have been replaced by a better one, more relevant to the text.

These criticisms do not alter the fact that Sir Godfrey Fisher has succeeded in his declared aim of indicating 'some of the difficulties, inconsistencies, and contradictions likely to be encountered' in demolishing the existing Barbary Legend, even if the story which he substitutes for it is not completely coherent nor entirely convincing.

C. R. BOXER

THE WIND IS FREE. By FRANK A. WIGHTMAN. No. 26 in the Mariners Library. Published by Rupert Hart-Davis, London. $5 \times 7\frac{1}{2}$ *inches.* 267 *pages.* Price 10*s.* 6*d.*

This is another of the series of maritime books included in the Mariners Library published by Hart-Davis. All this series are very nicely got up and sold at a very moderate price and this particular volume, *The Wind is Free*, is no exception.

The author is a South African who, after many years in uncongenial employment, apparently managed to save enough money to leave the world of commerce and sail his own vessel, with one friend as crew, from South Africa across the Atlantic to the Caribbean. But before he did this he had to acquire his yacht, this he did by building her himself in his spare time. This was a really marvellous feat as the author himself says 'I was so fat-headed with tools that my friends used to say I could not drive a nail in straight', yet in spite of this he managed to build a tried, sea-going

ship. He certainly deserved all the fun and pleasure he got from his voyage. All the same it would be interesting to know in a little more detail how he managed to pick up his knowledge of boat building and the mastery of the necessary tools. At one point he admits 'I was still lacking two essentials...cash; and that knowledge of the sea that is granted to those who make their living on it'. A little later he joined the *Birkdale*, in some capacity not stated to get that knowledge, but before he actually did so he threw up his job in the city 'with a whoop of exultation', hardly the way one would have thought, to raise the necessary cash. For the War he joined the Navy, whether R.N. or South African Navy is not stated, but whichever it is he puts in some rather cheap jibes at that service, which seems rather a pity, otherwise the book is to be thoroughly recommended.

H. O. HILL

Robin Martin of the Royal Navy. By Captain St John Cronyn, R.N. Chatto and Windus. $5 \times 7\frac{1}{2}$ *inches.* 143 *pages.* Price 8*s.* 6*d.* net.

This is one of a series of 'Career Books'. The idea is to describe a lad's initiation into the world of the bread-winner, by means of a succession of typical incidents, and with characters who are 'living'. Robin Martin's choice is the Navy, and the story of his early training is told herein by a distinguished officer. The Service takes him to the West Indies, among other places, and the end of the book shows him with every chance of a commission.

OLIVER WARNER

Navires et Barques...sur des Mosaiques...à Sousse.... By L. Foucher. Tunis, 1957. $10 \times 7\frac{1}{2}$ *inches.* 44 *pages.*

This publication of the Tunisian Institut national d'Archéologie et Arts describes and illustrates a number of mosaics bearing representations of ships, galleys and boats, discovered of recent years in the neighbourhood of Sousse (Susa) in Tunisia and believed to date from the third and fourth centuries A.D.

One of the ships is that shown on p. 249 of the *M.M.* for 1956, in which Commandant La Roerie asks us to recognize bowlines some 1000 years before their next appearance. To Dr Bowen, on the other hand, the ropes in question are not bowlines but some kind of tackle for raising or lowering the foremast (*M.M.* 1957, p. 61). Mr Foucher accepts them as bowlines, but probably wrote without seeing Dr Bowen's note; actually it seems very doubtful if either interpretation is correct.

One reason for doubting the fidelity of these mosaic-ships is that they all show ram bows only suitable for galleys. Even some of the small boats are of the same improbable shape. One can hardly say that this is necessarily wrong, but it certainly conflicts with the idea of Roman ships gained from sculptures. Still, there these ram bows are in plenty and here is a well illustrated book in which to study them and other details of ships of the period.

R. C. ANDERSON

Cape of Storms, Trawling off the Coast of North Russia. By Hugh Popham. Published by Rupert Hart Davis, London. $5\frac{1}{2} \times 8\frac{1}{2}$ *inches.* 208 *pages.* Price 21*s.* net.

Since the decline of the herring fishing on the Dogger Bank and in the North Sea generally, the fisherman has had to go further afield to earn his livelihood. Great quantities of cod and haddock are now being caught off the shores of Iceland, Greenland, Spitzbergen, and as far east as the Barents Sea off the northern coast of Russia. As a result the trawler has been developed very considerably, and is now one of the most efficient ships on the sea.

The modern deep sea trawler is a vessel of nearly 200 ft. long with engines, steam or diesel,

of from 900 to 1400 B.H.P. and a speed of up to 13½ knots. Direction finders, radio telephones, and radar are a commonplace, and the trade is so highly competitive that the skipper and his officers are never free from the strain of modern life.

With the changed conditions the life of the majority of fishermen has changed. Instead of being away from home for only a night or two at a time, the fishing grounds are now some 1500 miles or more away and he is at home for only about two days in every four weeks.

In view of the foregoing it is surprising that so little has been written about the life of the present-day deep-sea fisherman. However, in the book under review the author has done much to meet the deficiency. In the summer of 1955, when doing some work on the Fishery Cruiser *Romola* off the west coast of Iceland, the author was given a lift home in a modern diesel trawler. The skipper invited him to join them in a fishing trip to the White Sea, which he did, and this book is the result. He became very friendly with both skipper and crew, and in his acknowledgements makes special mention of the efforts of the skipper to make the book as accurate an account of distant-water trawling as possible. The economics of the trade, the methods of fishing, and the gear used, were fully discussed, and the author has given a very clear picture of the whole business. The book is interspersed with many revealing conversations and discussions with various members of the ship's company about their war experiences and their views of life in general.

It is a hard life, with cold, stormy seas, and in midwinter only four hours of rather feeble daylight. The ship must have low freeboard to facilitate the getting on board of the trawl, and this makes for a wet, uncomfortable deck: but against this the crew have comfortable quarters aft, with messroom, bathrooms, and drying rooms, and the wireless operator can switch on news and music for those not on duty.

The author has an easy, readable style, and his impressions and descriptions of his experiences make fascinating reading. However, not all his impressions are of storm and stress. On the way home, sailing along the Norwegian coast, after commenting on the lonely life of the crofters living on the mountainous shores, he concludes: 'one's mind is irradiated with sunlight and the inexhaustible glory of the earth'.

The illustrations include a map, a drawing of the trawl and its gear, and a number of beautiful colour photographs, one showing ice on the fo'c'sle head with a lovely rosy after-glow over the sea, and another of a cold, green sea contrasted with the warm, red tones of a trawler in the middle distance, being especially beautiful. Altogether this is a book to read and to keep.

E. BOWNESS

A Narrative of my Professional Adventures (1790–1839). By Sir William Dillon. Edited by Michael Lewis. Vol. II, 1802–1839 Navy Records Society; 9 × 6 inches. 515 *pages; 2 illustrations; map; appendices; index.* Price 45*s.* to non-members.

'The Navy, in the abstract, is never wrong: is never bad: is never beaten: is, in his every thought and word and deed, the prime object of his affection, his veneration, his worship.' Thus Professor Lewis of Sir William Dillon, in concluding a notable task of editing. The first volume of Dillon's *Narrative* was valuable for much, including a detailed account of what it was like to be a 'Child of the Service', in both a literal and a metaphorical sense, when Lord Howe was the great paragon in the Navy. The second and concluding volume shows Dillon growing in seniority and, later, in his decline, which was gradual, and spiced with occasional good luck. It also contains an account of captivity in France which should never have occurred, since Dillon was wrongfully held while acting under a flag of truce. He returned home to serve as commander and post-captain in active and in temporary commands, in trooping, in America, China and India until over four years after the long French war had ended. Then there came an enormous break ('The Wilderness', from November 1819 to July 1835) followed by an almost unbelievable stroke of fortune—a last commission: and then the inevitable beach, this time for good.

The interest of Dillon's *Narrative* is truly remarkable. The MS., so the editor indicates, is elephantine in size, and much of it has therefore been 'digested' in his own series of concise and sensible summaries. What is preserved and published is valuable for three distinct reasons. The first is that Dillon was a plain sea officer of a great age in the navy, one who had the industry to 'put everything down" for the benefit of himself and (perhaps) of posterity. The second is that, despite the fact that he was humourless, tiresome if not boring as a character, and much too often right to be a congenial companion, his innate loyalty and sense of truth, his bravery and experience—a fight with a powerful Danish opponent in 1808 is the high light of this second volume—and his sheer staying-power as a narrator, almost mesmerizes the reader who is interested in the period. The third is Professor Lewis's editing. His task cannot have been enviable, but the result of his devoted research is that anyone who wishes to understand what an *ordinary* sea officer was like in the great era of sail, the adventures and service he might meet, the patrons he would have to cultivate, and the reversals of fortune likely to be encountered, would be ill-advised to miss this voluminous writer.

OLIVER WARNER

73 North. By Dudley Pope. Weidenfeld and Nicolson. $8\frac{1}{2} \times 5\frac{1}{2}$ inches; 320 *pages; plates; maps; index.* Price 21*s.* net.

Mr Pope has written an account of the Battle of the Barents Sea, fought in December 1942, during the course of which Captain Sherbrooke won the Victoria Cross for his skilful handling of a small group of destroyers in the face of a battleship, a heavy cruiser, and a German destroyer force. His bravery and address saved the Russian convoy he was escorting from damage, and a covering force under Admiral Burnett, arriving later, turned German discomfiture into flight. The effects of the battle were enormous, for as a result of the failure of his surface vessels, Hitler decided to concentrate solely on under-sea warfare. This is a great deal fuller than the usual run of last war books, and is notable for the good use it makes of German documentation.

OLIVER WARNER

Subsídios Para a História Militar Marítima da India, 1585–1669. By Vice-Admiral [retd.] Alfredo Botelho de Sousa, Portuguese Navy. Vol. iv, 1636–1650 (497 *pages*). Lisboa; Ministério da Marinha. 1956.

The first three volumes of this series were reviewed in the *M.M.* October 1930, *M.M.*, vol. xxxv (1949), pp. 159–60, and *M.M.*, vol. xli (1955), pp. 87–8 respectively, and that noticed here continues with the story of the decline of the Portuguese empire in the East under the continuous pressure of superior Dutch sea-power. The English played a lesser role after the conclusion of the Anglo-Portuguese Truce at Goa in 1635, although it was they who had helped the Persians to capture Ormuz in 1622, thus demolishing one of the three strategic pillars on which the 'State of India' was based. The second, Malacca, was taken by the Dutch in 1641; but the third, Goa, was destined, surprisingly enough, to outlive English Madras and Dutch Batavia—a consummation which certainly could not have been foreseen in 1650, or even two and a half centuries later for that matter.

It was Governor-General Antonio Van Diemen (1636–45) who decisively broke Portuguese maritime power by his policy of blockading Goa and the Straits of Malacca, while simultaneously mounting an invasion of Ceylon, nominally in aid of the hard-pressed Raja Sinha II in the highlands of Kandy, but in reality with the aim of supplanting the Portuguese in the coveted cinnamon-bearing coastal districts. These three campaigns, to say nothing of numerous lesser operations which harassed the Portuguese from the Persian Gulf to Japan, were directed with great skill and pertinacity from Batavia; and Van Diemen died in the knowledge that his aims were virtually achieved. His grasp of the importance of sea-power, and his ability to use it, was clearer and greater

than that of Jan Pieterszoon Coen; and it is Van Diemen, and not the grim Coen, who was the real founder of the Dutch East Indian empire on a secure maritime basis.

Some of the Portuguese authorities were equally alive to the importance of sea-power, as the correspondence of the Lusitanian Crown with successive viceroys and governors at Goa clearly shows. But their resources were less than those of the Dutch, and (more important) they seldom made the best use of those they had. There were perennial complaints about the lack of ships, money, and men; but their Indian-built galleons from the yards of Baçim (Bassein), Goa and Cochim were greatly superior to any vessels the Dutch could produce; their soldiers were more inured to tropical warfare; and fortunes were still made in the Macao-Japan trade (before 1640), and in the East African gold, ivory, and slave trades. These resources, however, were largely squandered. Apart from the brilliant campaigns of Nuno Alvarez Botelho in the Persian Gulf and Malayan waters (1625–30), the Portuguese *Armada de Alto Bordo* (High-Seas Fleet), was used almost entirely defensively, as a 'fleet in being' in the river of Goa, instead of being boldly employed in offensive operations, as Botelho and a few others advocated. Money was lavished on the maintenance of churches, convents, and a parasitical ecclesiastical establishment at Goa—which the Crown more than once emphasized was the first call on the colonial exchequer—at a time when unpaid soldiers and sailors either starved in the streets, or entered the ranks of the Religious Orders to keep themselves alive. This volume is filled with complaints to this effect from successive viceroys, who, however, seem as a rule to have been more vocal in deploring than active in remedying this state of affairs. Finally, the quality of the soldiers and sailors often left a good deal to be desired. Jail-deliveries were a common method of furnishing cannon fodder for the colonial battle-fields, and the proportion of untrained youths who were sent out to the East was unduly high. But the Dutch and English leaders often complained of the poor quality of their own men, and as Napoleon observed: 'there are no bad soldiers, only bad officers'.

The Portuguese, with their exclusive reliance on the *fidalgos* ('gentlemen of blood and coat-armour') as naval and military leaders, were at a disadvantage compared with the Dutch and English East India Companies, whose commanders were mainly (though not invariably) selected for their professional merits rather than their gentle birth. This fact did not escape the more intelligent Portuguese observers, one of whom (writing in 1656) pointedly contrasted the aristocratic *fidalgos* who had lost Ceylon and Malacca, with the Dutch tarpaulins and tradesmen's sons who had conquered those places. This difference was particularly noticeable in the sea-service, where incompetent and inexperienced *fidalgos* were placed in charge of ships and fleets, at times when veteran seamen who had worked their way up from before the mast were available. There were no De Ruyters and Cloudesly Shovels in the Portuguese Navy.

The Portuguese also made a great—if natural—mistake in trying to defend too many of their far-flung possessions without having naval forces adequate to maintain communications between them. As Captain João Ribeiro (a veteran of the Ceylon campaigns of 1640–58) observed, it would have been better to have concentrated on the defence of a few vital places, like Ceylon and Malacca, and to have abandoned the less valuable settlements, rather than squander their resources as they did by defending each link in a chain of isolated forts from Mozambique to Macao. But (as we know from our own experience in the Far East in 1940–1) considerations of national prestige militated against any such policy of cutting their losses. The Council of Portugal at Madrid probably expressed the national feeling more accurately than did Captain João Ribeiro when it rejected a similar suggestion with the quixotic observation that 'India had been gained with the sword, and with the sword it would be defended'.

Nevertheless, when we recall that the Portuguese were engaged in a bitter (and ultimately largely successful) war against the Dutch-West India Company in Brazil and West Africa from 1624 to 1654, and in a war of independence against Spain from 1641 to 1668, and even against Cromwellian England in 1650, it is remarkable that they managed to hold out in Asia for as long as they did against the superior and better-directed Dutch forces. This was especially so, since losses from disease and shipwreck reached a new 'high' in this period, the decade of 1640–50 being particularly disastrous. The shipwreck-rate was largely a reflexion of the administrative shortcomings at Lisbon and Goa—since it was chiefly due to predictable and avoidable causes,

such as the unseaworthiness of four-deck carracks, the reckless overloading of Indiamen, the shortage of trained pilots and seamen, and the incompetent arrogance of gentlemen-commanders, against which the Crown legislated intelligently and repeatedly, but largely in vain. Mozambique, which was a frequent port of call on both the outward and the homeward voyage, was very much of a 'white man's grave'; and one viceroy suggested that Indiamen which left Lisbon too late to reach Goa before the monsoon closed the Mandovi River should endeavour to winter at Mombassa or at Muscat instead (p. 420).

The controversy over the relative merits and demerits of four-deck carracks and three-deck galleons (*M.M.* vol. xxvi, October 1940, pp. 388–406) continued during this period, and this volume contains some additional documentation on this point. Expert opinion was overwhelmingly in favour of the galleon-type, but carracks were still being built in 1650, largely, it would appear, on account of the traditional Portuguese conservatism. The teak-built Indian galleons aroused the admiration of both English and Dutch; but they did not make such a good showing against the lighter Dutch ships in the battles off Goa's bar in 1637–38, as did the Spanish Manila galleons which chased the Dutch blockaders away from Luzón before and later. This was not due to the respective merits of the ships concerned so much as to the men who manned them, for the Biscayan seamen who officered the Manila galleons were as good as any in the world. Portugal's shortage of trained seamen was drastically evidenced in 1643, when it was stated in the Viceroy's Council at Goa that there were less than a dozen pilots capable of navigating ships from Lisbon to India, and they were all at Goa, due to the Dutch blockade which had detained some of them there for four years! There was doubtless some exaggeration in this statement, but not much.

As in his previous volumes, Vice-Admiral Botelho de Sousa has made excellent use of the principal Dutch printed works relating to his subject—in this instance Van Geer's *Opkomst van het Nederlandsch gezag over Ceilon* (1895), and N. MacLeod's *Oost Indische Compagnie als zeemogendheid in Azië* (2 vols. 1927). He has thus avoided the unilateral vision which so often mars historical writing in this field, but some of the criticisms made of the previous three volumes still apply in this one. There are no maps or indices, though this can be remedied in the concluding volume, and no attention has been paid to the printed Spanish sources (such as Pastells's edition of *Labor Evangelica*, 3 vols., Barcelona, 1903–4), which must be consulted for any proper appreciation of the strategic situation in the China Sea. Several relevant specialist articles, even in Portuguese, have been ignored, such as those on the sea-fights of 1637–38 in the *Boletim do Instituto Vasco da Gama*, Nos. 37 and 40 (1938). Too much space is still devoted to long accounts of bush-warfare in Ceylon, and the tedious Luso-Dutch truce negotiations of 1641–44, which could have been easily resumed in a few pages and which distract attention from the maritime theme. Too much reliance is placed on the fantastic assertions of Padre Fernão de Queiros S.J., who in his *Conquista temporal e espiritual de Ceylão* inflates the enemy's losses in a way which anticipates the communiqués of the rival air services in World War II. No use is made of Peter Mundy's inimitable account of Captain Weddel's doings in the Pearl River and the resultant Anglo-Portuguese imbroglio at Macao in 1637, although this would have clarified the confused account given of this episode on pp. 97–107. Misprints are fairly numerous, though fortunately few are serious, and the marginal dates are sometimes wrong. More might have been said about the thorny problem of the *caixas e fardas de liberdade*, or chests and bundles of duty-free goods, which officers and sailors were allowed to export in accordance with a sliding-scale, in order to compensate for the low wages which were all the Crown could afford to pay. But despite these and other criticisms which could be made, the work as a whole is of permanent value as a detailed and singularly fair-minded account of the struggle for supremacy in Asian seas and coasts during the first half of the seventeenth century.

C. R. BOXER

CHALLENGER. THE LIFE OF A SURVEY SHIP. By GEORGE STEPHEN RITCHIE, Captain Royal Navy. London: Hollis and Carter. 1957. $8\frac{3}{4} \times 5\frac{1}{2}$ *inches;* xxi + 249 *pages;* 35 *illustrations;* 14 *diagrams and maps.* Price 30*s.* net.

Of all the biographies of various ships that I have read, this is certainly one of the most interesting. To the average reader of travel books and sea journals, the work of the Hydrographic Department of the Admiralty is something of which he knows little or nothing, and of the work of the little surveying ships that map the shores and oceans of the world he knows even less. This is the book which will tell him all about both, in a lucid and delightful way, and entertain him with good stories into the bargain.

Captain Ritchie and his associates are to be heartily congratulated on the appearance of this most engaging Record of a gallant ship, of the officers and men who sailed her, and of all their work by land and sea.

Though not a professional surveyor myself, as an old navigator who has done a little amateurish surveying, and who has sailed many of the waters charted by the Challenger, I derived a great deal of enjoyment in going over the old ground again and in such goodly company.

The Naval Surveying Service was established at the end of the eighteenth century. Its work was to record and index the vast amount of surveying data gathered at and before that time by many British Navigators, including such men as Captain Cook (the greatest surveyor of all time); Matthew Flinders; and Captain Dalrymple of the East India Company and afterwards first Hydrographer of the Navy.

Soon special ships were needed for survey duties, manned by officers specially selected for this work. About eight small ships have since been maintained, and sixty or seventy naval officers all highly trained, and employed as surveyors. In addition, a large number of unskilled or semi-skilled officers, and men, who volunteer for the work are employed as assistants, and this work is open to all ranks and ratings, from the doctor to the cook's mate.

When I was young, officers were supposed to volunteer for the surveying for one, or more, of the three D's. viz. Ducks, Dollars and a Dirty shirt. The idea being that (1) surveyors enjoyed special opportunities for sport, (2) that the pay was relatively good, and (3) that when on the job, dress regulations were completely ignored.

Whether there was any truth in all this, I would not know, though I take leave to doubt whether surveyors really find much time for duck-shooting.

As for the *Challenger* herself, small ship though she was, it is good to know that she did provide reasonable accommodation and comfort for her people, which is more than can be said of some of her predecessors. I have in mind the *Stork* and the *Dart*, dreadful bug-ridden little wooden craft. The latter, in particular, was an old Australian coasting schooner, cut in half, lengthened amidships, and provided with a rather primitive steam engine and boiler, often fired by wood. She could do about $5\frac{1}{2}$ knots under steam, but was credited with once having made 10 knots under sail with a gale of wind behind her.

How her officers ever did their chart work on board the beastly thing I never could understand. Most of her work, when I knew her, was on the Great Barrier Reef and there was plenty of work to be done there, 55 years ago.

The *Challenger*'s work, as described in Captain Ritchie's book, took her to the frozen fiords of the Labrador, to the West Indies; Iceland; West Africa; the East Indies; Australia; the Persian Gulf; Cyprus; and the Pacific Islands. With of course a goodly slice of active war service thrown in. But that is quite a story in itself.

By the way there was another survey ship *Challenger*, long before Nares, which Captain Ritchie seems to have overlooked. She was lost on 19 May 1835 off Mocha on the coast of Chile. She had been making surveys for three years in the Pacific, and her Commander Captain Seymour was a most experienced officer. Some ascribed her loss to unknown currents, others to submarine convulsions, for a very severe earthquake occurred about this time. Only two men lost their lives in this wreck. Particulars of the loss of this ship may be found in the *Beagle's* records 1832–36.

A. MACDERMOTT

THE TRANSATLANTIC MAIL. By FRANK STAFF. Adlard Coles Ltd. (London. Harrap; New York: John de Graff Inc.). 10 × 7½ *inches*, 191 *pages; plates maps, etc.* Price 45*s*.

This is a technical and historical account of how mail was sent across the Atlantic from earliest times until to-day. It is mainly concerned with the actual technique of getting a letter into the post, and having it delivered when ashore on the other side of the ocean. Incidentally it deals with the means of crossing the sea, but the part played by the ships of the Merchant Service, and to a smaller degree by H.M. Post Office Packets, although authoritative and most interesting, is not the main theme of the work. The narrative occupies nine chapters forming Part I of the book, while Part II, taking up about one-third of the whole, consists of a sort of appendix containing proclamations, letters, notices from the Postmaster-General, postage rates, and long lists of vessels belonging to the various sailing and steamship lines. The first date mentioned in the text is 1635, but there is a Proclamation by Queen Elizabeth I, dated 26 April 1591, as to the 'disorders among the postes of our realme in generall'. The author gives a vivid account of the primitive means of sending a letter to America towards the end of the seventeenth century, when a person just popped his letter into a bag casually hanging up in a coffee-house or some such place, trusting it would reach the addressee by some even more casual means.

The Post Office Packets have a fair share of the story, the most useful contribution being a very complete list in Part II of the Falmouth vessels employed on the New York, West Indies and North American services, from 1755 to 1821. The Remarks column records the ships' fates with an unpleasantly recurring entry 'captured' in the earlier of these years. Readers of *The Mariner's Mirror* will be pleased to see accounts of such old favourites as the *Savannah*, *Curaçao*, *Sirius*, *British Queen* and *Great Britain* which at times were engaged in carrying transatlantic mail. A hundred years ago there was a different fashion in naming a company or line of sailing or steam vessels, and while to-day they are generally called after their owners or the routes on which they ply, it was formerly the practice for them to be recognized by their flag or other distinguishing mark; so in this book we have such fleets as the Black Ball, Red Star, Blue Swallow Tail, Black X, Red Swallowtail, Red Cross or St George's Cross. It was the custom to have an enormous black ball or other emblem painted in the middle of the fore topsail.

The dust-jacket is covered with representations of numerous postal stamps (before the days of 'adhesives'), but most noticeable is a drawing in colour of the famous British 'postboy flag', used by Post Office Packets, and as this flag is the subject of constant enquiries, one rather hoped that it would be dealt with inside. But it is not. There is a useful bibliography, and the member of our Society who is fond of lists of ships will be rejoiced to find that there are no fewer than 800 listed in their own index.

H. P. MEAD

EDITORIAL NOTE

The National Maritime Museum is reproducing for the 1958 Christmas Card a colourful painting by the famous Dutch seventeenth-century Marine artist, Abraham Storck.

The picture shows a ship arriving in a Mediterranean port from the Holy Land. By arrangement with the Turkish Empire, a ship could obtain a safe conduct to the Holy Land to carry pilgrims. The outward sign of this was the Jerusalem flag seen at the masthead of the ship.

The cost of the Cards is 13*s*. per doz. (post free) and orders with remittances should be addressed to:

H.M. Stationery Office,
P.O. Box 569,
London, S.E. 1.

The MARINER'S MIRROR

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In the Index of Ships' Names, abbreviations for nationalities of ships other than British have been expanded as required to make them self-explanatory in all cases. The dates given are those of launching or acquisition where possible; otherwise, indicated by parentheses, those of the reference.

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Printed in Great Britain at the University Press, Cambridge (Brooke Crutchley, University Printer)

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